Life Science Tools & Technology

Ultraviolet Products ■ Light Sources
Laboratory Products ■ BioImaging Systems

UVP®

An Analytik Jena Company

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About UVP

Thank you for your interest in UVP's products. We look forward to assisting you with product information plus technical and sales assistance. We appreciate the opportunity to be of support to you.

This catalog covers UVP's general line including ultraviolet and laboratory products, light sources and Basic Imaging Systems. Highlights of UVP's Advanced Imaging Systems are provided. Additional information is available on our website at **UVP.com** including further product details, application notes, technical support information and new product releases.

Since 1932, UVP has created and designed ultraviolet lamps and products for science, industry and education. Today, UVP continues its research and development of laboratory equipment such as an extensive array of gel documentation and imaging systems, ultraviolet products, hybridization ovens and UV sterilization equipment. Applications for UVP's instruments includes chemiluminescence, electrophoresis, fluorescence, bioluminescence, colorimetric, sterilization and more. See the difference in your results with UVP's equipment. Easily visualize, identify, document and analyze with assurance that you are using quality, reliable equipment from UVP.

In addition to over 100 employees in our Upland facility, UVP has a worldwide network of sales, service and support representatives to assist with your requirements. Our innovative engineering and state of the art manufacturing techniques and equipment make UVP products the first choice of leading organizations around the world. Integrated manufacturing processes allow quick turnaround of production. UVP's capabilities combine computer-aided product design engineering, cost-effective sheet metal and paint production, focused work-cell assembly and inspection and quality control assurance for complete customer satisfaction.

UVP is now part of Analytik Jena which is located in Jena Germany. Analytik Jena offers an extensive Life Science product line which complements UVP's products. Many Analytik Jena Life Science products are available through UVP in the Americas. Contact UVP's Upland office for product information.

UVP's headquarters and manufacturing facility is located in Upland, California. The European operations, Ultra-Violet Products Ltd., is located in Cambridge, England.

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UVP's Upland facility is located in Southern California

Ultraviolet Lamps

Compact UV Lamps

Compact UV Lamps (4-watts) feature models with longwave (365nm), shortwave (254nm) or multiple UV.

- Combination wavelength version comes with a snap-on selector plate for switching between wavelengths
- Lightweight, easy-to-handle lamp design
- Comes in 12V style (for cigarette lighter operation)

***J-124 Stand** for use with Compact UV Lamps.*

Dimensions Compact Lamps:

7.8L x 2.8W x 2.1H in. (198 x 71 x 53mm)
Weight: 1 lb (0.45kg)

Dimensions J-124 Stand:

6.5H x 7.5W x 4.8D in. (165 x 190 x 122mm)

Handheld UV Lamps

Handheld UV Lamps (6-watts) include shortwave (254nm), longwave (365nm) UV or the combination shortwave/longwave in one lamp.

- Comfortable, ergonomically designed handle for easy handling
- On/off switch is located on the back of the lamp

Handheld Lamps - Ordering Information	
UVG-54 6-watt, 254nm UV Replacement Tube	95-0004-09 (115V) 95-0004-10 (230V) 34-0013-01
UVGL-55 (split-tube) 6-watt, 365nm/254nm UV Replacement Tube	95-0005-05 (115V) 95-0005-06 (230V) 34-0015-01
UVL-56 6-watt, 365nm UV Replacement Tube	95-0006-02 (115V) 95-0006-03 (230V) 34-0034-01
UVM-57 6-watt, 302nm UV Replacement Tube	95-0104-01 (115V) 95-0104-02 (230V) 34-0044-01
UVGL-58 6-watt, 365nm/254nm UV Replacement Tube 365nm UV Replacement Tube 254nm UV	95-0007-05 (115V) 95-0007-06 (230V) 34-0034-01 34-0013-01

Dimensions Handheld Lamp: 14.9L x 3.2W x 2.5H in. (378 x 81 x 64mm) **Weight:** 2 lb (0.91kg)

***Compact UV Lamps** (4-watts) feature an on/off switch conveniently located on the back of the lamp.*

Compact Lamps - Ordering Information	
UVG-11 4-watt, 254nm UV Replacement Tube	95-0016-14 (115V) 95-0016-15 (230V) 34-0003-01
UVGL-15 (split-tube) 4-watt, 365nm/254nm UV Replacement Tube	95-0017-09 (115V) 95-0017-10 (230V) 34-0004-01
UVL-21 4-watt, 365nm UV Replacement Tube	95-0018-02 (115V) 95-0018-03 (230V) 34-0005-01
UVGL-25 4-watt, 365nm/254nm UV Replacement Tube 365nm UV Replacement Tube 254nm UV	95-0021-12 (115V) 95-0021-10 (230V) 34-0005-01 34-0003-01
UVL-23 4-watt, 365nm BLB UV Replacement Tube	95-0019-01 (115V) 95-0019-03 (230V) 34-0010-01
UVL-23R 4-watt, 365nm BL UV Replacement Tube	95-0019-14 (12V) 34-0005-01
J-124 Lamp Stand	98-0020-03

Compact and Handheld UV Lamps can be used with viewing cabinets for illumination of samples in a darkroom environment. *See page 13 for details.*

***Handheld UV Lamps** are lightweight 6-watt models.*

Shown with optional J-129 Lamp Stand for hands-free lamp use.

J-129 Lamp Stand	98-0016-03

Dimensions J-129: 9.75H x 13L in. (248 x 330mm)

3UV™ Multi-Wavelength UV Lamps

This innovative **3UV lamp** (patented) houses three UV wavelengths in one lamp.

- Selection of each wavelength is by an easy turn of the dial located on one end of the housing
- The uniquely designed reflectors mounted behind each tube provide maximum UV for fluorescence applications
- Lightweight plastic and ergonomically-designed housing for handheld or stationary use

Ordering Information	
3UV-34 4-watt 254nm/302nm/365nm UV	95-0341-01 (115V) 95-0341-02 (230V)
3UV-36 6-watt 254nm/302nm/365nm UV	95-0342-01 (115V) 95-0342-02 (230V)
3UV-38 8-watt 254nm/302nm/365nm UV	95-0343-01 (115V) 95-0343-02 (230V)

For replacement tubes: see bottom of page.

UV is used in many applications. Refer to the catalog back cover for examples of uses.

***3UV Lamps** hold longwave, shortwave and midrange UV in one lamp (8-watt model pictured).*

Lamp Dimensions:

3UV-34: 9.5L x 3W x 4.5D in. (241 x76 x114mm)
3UV-36: 12.5L x 3W x 4.5D in. (318 x76 x114mm)
3UV-38: 15.5L x 3W x 4.5D in. (394 x76 x114mm)

EL Series Lamps

EL Series Lamps are fabricated of extruded metal with a scratch-resistant powder paint finish. EL Series UV lamps are available with 4, 6, or 8-watts and a selection of UV wavelengths and white light combinations. A lamp can be placed in the **J-138 stand** (see p. 5) for hands-free use.

3UV and 2UV EL Series Lamps

The **3UV**™ EL Lamp model is available with 8-watt tubes.

- 3UV model houses three UV wavelengths (254nm shortwave, 302nm midrange and 365nm longwave) in one unit, reducing the need to purchase multiple lamps
- Easily switch among the three UV wavelengths as required for your application

2UV™ models include two different UV wavelengths in one lamp. Refer to ordering information for selection of wavelengths.

Lamp Dimensions:

4-Watt: 9.8L x 3.8W x 2.5D in. (249 x 97 x 64mm)
6-Watt: 12L x 3.8W x 2.5D in. (305 x 97 x 64mm)
8-Watt: 14.8L x 3.8W x 2.5D in. (376 x 97 x 64mm)

Replacement Tubes	
Tube, 8-watt, 365nm	34-0006-01
Tube, 8-watt, 302nm	34-0042-01
Tube, 8-watt, 254nm	34-0007-01
Tube, 6-watt, 365nm	34-0034-01
Tube, 6-watt, 302nm	34-0044-01
Tube, 6-watt, 254nm	34-0013-01
Tube, 4-watt, 365nm	34-0005-01
Tube, 4-watt, 254nm	34-0003-01

Protective eyewear is essential for anyone using UV equipment. See page 7 for UV blocking eyewear.

***EL Series UV Lamps** are lightweight and easy to handle (left to right: UVLMS-38, UVLS-28, UVL-14).*

3UV and 2UV Lamp Ordering Information	
UVLMS-38 8-watt, 3UV 365nm/302nm/254nm	95-0252-01 (115V) 95-0252-02 (230V)
UVLM-28 8-watt, 2UV 365nm/302nm	95-0251-01 (115V) 95-0251-02 (230V)
UVLS-28 8-watt, 2UV 365nm/254nm	95-0201-01 (115V) 95-0201-02 (230V)
UVLM-26 6-watt, 2UV 365nm/302nm	95-0278-01 (115V) 95-0278-02 (230V)
UVLS-26 6-watt, 2UV 365nm/254nm	95-0279-01 (115V) 95-0279-02 (230V)
UVLS-24 4-watt, 2UV 365nm/254nm	95-0271-01 (115V) 95-0271-02 (230V)

White/UV and Twin EL Series Lamps

UV/White and Twin **EL Series Lamps** are available in four, six and eight watt configurations.

- **White/UV Models** include one UV tube (254, 302 or 365nm) and one white light tube in one lamp
- **Twin Models** include two tubes of the same UV wavelength for added UV intensity

***EL Series White/UV** lamps include UV and white light (UVS-14 shown).*

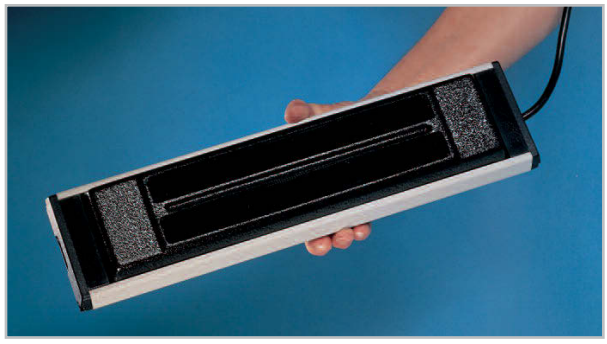
UV/White Models Ordering Information	
UVL-18 8-watt, 365nm UV/white	95-0198-01 (115V) 95-0198-02 (230V)
UVM-18 8-watt, 302nm UV/white	95-0199-01 (115V) 95-0199-02 (230V)
UVS-18 8-watt, 254nm UV/white	95-0200-01 (115V) 95-0200-02 (230V)
UVL-16 6-watt, 365nm UV/white	95-0272-01 (115V) 95-0272-02 (230V)
UVM-16 6-watt, 302nm UV/white	95-0273-01 (115V) 95-0273-02 (230V)
UVS-16 6-watt, 254nm UV/white	95-0274-01 (115V) 95-0274-02 (230V)
UVL-14 4-watt, 365nm UV/white	95-0264-01 (115V) 95-0264-02 (230V)
UVS-14 4-watt, 254nm UV/white	95-0266-01 (115V) 95-0266-02 (230V)

Accessories for EL Series UV Lamps:

- **J-138 lamp stand** is for use with any EL Series Lamps allows for hands free use
- **C-10E4** and **C-10E6 cabinets** can be used with EL Lamps which emit UV in a darkroom environment (see page 13 for cabinet ordering information)
- The 8-watt EL lamps can be used with the **C-65 cabinet** when a darkroom environment is needed (see page 13 for cabinet ordering information)

***J-138 Stand** shown with the 8-watt EL Lamp.*

J-138 Stand Dimensions:
10.74H x 13L x 3W in. (273 x 330 x 76mm)



***EL Series Twin Models** have two tubes of the same UV wavelength (UVL-28 shown).*

Twin Models - Ordering Information	
UVL-28 8-watt, 365nm UV	95-0248-01 (115V) 95-0248-02 (230V)
UVM-28 8-watt, 302nm UV	95-0250-01 (115V) 95-0250-02 (230V)
UVS-28 8-watt, 254nm UV	95-0249-01 (115V) 95-0249-02 (230V)
UVL-26 6-watt, 365nm UV	95-0275-01 (115V) 95-0275-02 (230V)
UVM-26 6-watt, 302nm UV	95-0276-01 (115V) 95-0276-02 (230V)
UVS-26 6-watt, 254nm UV	95-0277-01 (115V) 95-0277-02 (230V)
UVL-24 4-watt, 365nm UV	95-0267-01 (115V) 95-0267-02 (230V)
UVM-24 4-watt, 302nm UV	95-0268-01 (115V) 95-0268-02 (230V)
UVS-24 4-watt, 254nm UV	95-0269-01 (115V) 95-0269-02 (230V)

Replacement Tubes	
Tube, 8-watt, White	34-0056-01
Tube, 8-watt, 365nm	34-0006-01
Tube, 8-watt, 302nm	34-0042-01
Tube, 8-watt, 254nm	34-0007-01
Tube, 6-watt, White	34-0063-01
Tube, 6-watt, 365nm	34-0034-01
Tube, 6-watt, 302nm	34-0044-01
Tube, 6-watt, 254nm	34-0013-01
Tube, 4-watt, White	34-0066-01
Tube, 4-watt, 365nm	34-0005-01
Tube, 4-watt, 254nm	34-0003-01
Tube, 4-watt, 302nm	34-0071-01

Accessories	
J-138 Lamp Stand	18-0063-01
C-10E4 Cabinet (for 4W EL Lamps)	95-0072-08
C-10E6 Cabinet (for 6W EL Lamps)	95-0072-09

Mini UV Lamps

Mini UV Lamps are 4-watt models with longwave (365nm), shortwave (254nm) ultraviolet or multiband split-tube shortwave and longwave in one unit. Lamps operate on four AA batteries (not included).

Mini UV Lamps *UVG-4, UVSL-14P, UVL-4.*

UVL-4F Mini UV Lamp *includes a longwave UV tube and a flashlight.*

- Excellent lamps for office or field inspection
- Lamps are lightweight and can fit into a pocket
- A nylon strap is attached for easy handling

Dimensions:

UVG-4, UVSL-14P 6.25L x 1W x 2.6H in. (159 x 25 x 66mm)
UVL-4 6.25L x 1W x 2H in. (159 x 25 x 51mm)
UVL-4F 6.5L x 2W x 1H in. (165 x 51 x 25mm)

Ordering Information	
UVG-4 4-watt, 254nm Replacement Tube	95-0158-04 (4AA) 34-0003-01
UVL-4 4-watt, 365nm BLB Replacement Tube	95-0125-05 (4AA) 34-0010-01
UVSL-14P Multiband split-tube 4-watt, 254nm/365nm Replacement Tube	95-0188-02 (4AA) 34-0004-01
UVL-4F 4-watt, 365nm BLB/Flashlight Replacement Tube	95-0305-03 (4AA) 34-0010-01

Portable & Rechargeable UV Lamps

Portable UV lamps have 6 watts and are operated by two 6-volt lantern batteries.

- The distinctive wrap around handle comfortably balances the lamp in your hand
- A built-in flashlight is included
- Optional rechargeable 6V batteries and charger are available

Portable UV Lamps *are lightweight for field use.*

Portable Lamp - Ordering Information	
ML-49 6-watt, 365nm BLB Replacement Tube	95-0011-01 (12V) 34-0016-01
UVG-47 6-watt, 254nm Replacement Tube	95-0009-02 (12V) 34-0013-01
UVGL-48 split-tube 6-watt, 254nm/365nm Replacement Tube	95-0010-02 (12V) 34-0015-01
Bulb, White	34-0014-01
Battery, 6V	45-0005-01
Battery, rechargeable 6V (115V) Charger (115V)	45-0005-02 58-0136-01

Portable UV Lamp Dimensions:

9.5L x 2.8W x 9.4H in. (241 x 71 x 239mm)
Weight: 4 lb (1.8 kg)

Rechargeable UV lamps (6-watt) feature a lightweight design and come in three dual-tube models.

- Lamps are equipped with an internal gel based, lead-acid battery which can be charged from a standard wall outlet
- UVSL-26P (shown) can operate with both longwave and short-wave at the same time
- Optional 12V adapter powers the lamp from a car cigarette lighter
- Use with the **C-10P Cabinet** (see page 13 for details)

Rechargeable UV Lamps *with built-in rechargeable battery.*

Rechargeable Lamp Dimensions:

5.5L x 3.0W x 9.8H in. (140 x 76 x 249mm); Weight: 4 lb (1.8 kg)

Rechargeable Lamps - Ordering Information	
UVL-26P 6-watt, 365nm Replacement Tube, 365nm BLB	95-0186-01 (115V) 95-0186-02 (230V) 34-0016-01
UVS-26P 6-watt, 254nm Replacement Tube, 254nm	95-0187-01 (115V) 95-0187-02 (230V) 34-0013-01
UVSL-26P 6-watt 254nm/365nm Replacement Tube, 365nm Replacement Tube, 254nm	95-0181-01 (115V) 95-0181-02 (230V) 34-0034-01 34-0013-01
Adapter, 12V	58-0127-02

Signature UV Lamps

Signature and fraud detection UV lamps use longwave UV to check the authenticity of signatures, documents, tickets, passports, currency and credit cards.

- Easy to operate
- Easy to detect forged documents and currency
- Safe to use

Ordering Information	
SL-2M Fraud Detection UV Lamp, 4-watt, 365nm	95-0164-01 (115V) 95-0164-02 (230V)
UVL-4 UV Lamp, 4-watt, 365nm	95-0125-01 (4-AA not included)
Replacement Tube, 4-watt, BLB	34-0010-01

SL-2M Lamp *Invisible inks or altered documents fluoresce when exposed to the UV.*

Dimensions:
SL-2M: 6.5W x 5.75D x 4.5H in. (165 x 145 x 114 mm)
UVL-4: 6.25L x 1W x 2H in. (159 x 25 x 51mm)

Mineralight® UV Lamps

Mineralight **R-52G Grid Lamp** provides a powerful, uniform source of high-intensity 254nm shortwave UV.

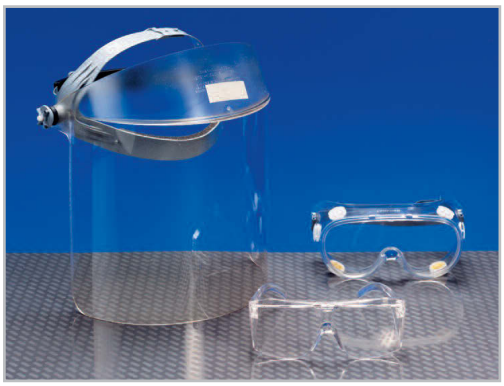
- For small scale mineral displays and laboratory applications including bacteria destruction, sterilization and photochemistry
- Removable filter assembly converts the lamp from fluorescent analysis to sterilizing uses

Ordering Information	
R-52G Grid Lamp 254nm UV	94-0012-05 (115V) 94-0012-06 (230V)
R-52G Grid Replacement	77-0002-02

R-52G *provides high intensity 254nm UV. Lamp mounts securely to the base for hands free use.*

Dimensions:
7.8H x 16L x 7.8W in. (198 x 406 x 198mm); Primary cord: 8 ft., secondary cord 3 ft.); Weight: 9.5 lb (4.3 kg)

UV Blocking Eyewear



Eyewear *protects the eyes from harmful UV.*

Goggles and Faceshield comply with ANSI-Z87.1 1986 specifications for eye and face protection devices.

Dimensions:

Spectacles:	2H x 6W in. (51 x 152mm)
Goggles:	3H x 6W in. (76 x 152mm)
Faceshield:	17dia x 8.25H in. (432 x 210mm)

Eye and face protection is essential for anyone working with ultraviolet sources which can cause burning to unprotected eyes and skin. Eyewear blocks wavelengths from 200 - 400nm.

- **Spectacles** are made of impact resistant polycarbonate. Top and side-shield design provides UV protection for the eyes. Orange spectacles block blue light that can cause haze.
- **Goggles** are constructed of specially-formulated plastic for optimum viewing contrast and lessened eye fatigue. Goggles feature a lightweight design and flexible rubber trim. Air vents allow air flow while blocking ultraviolet transmission.
- **Faceshield** covers the face and neck area.

Ordering Information	
UVC-303 Spectacles **UVC-310 Spectacles, orange**	98-0002-01 38-0240-01
Goggles UVC-503 Replacement Goggle Lens	98-0002-02 98-0002-03
Faceshield UVC-803 Replacement Shield	98-0002-04 38-0151-01

High Intensity UV Lamps

Blak-Ray® B-100 high intensity lamps supply brilliant UV irradiance for optimum fluorescence of materials. All "AP" series lamps come with a special heat resistant plastic. The Cool-Touch™ housing allows users to handle the lamp head regardless of how long the lamp has been operating.

B-100AP and B-100AP/R UV Lamps

The **B-100AP** provides 100 watts of high intensity longwave (365nm) illumination.

- 100 watt longwave bulb and ballast base
- At 18 in. (457 mm), the lamp produces a highly intense center of UV irradiance approximately 5 in. (127 mm) in diameter
- Lamp head rotates 360° when attached to the base
- The grip handle fits into the transformer base for easy lamp storage and hands-free lamp operation
- The B-100AP/R has the same features as the B-100AP but includes 20 ft (6.1 m) primary and secondary cords for added mobility
- Two cord holders on the B-100AP/R, extending 2.93 in. (74 mm) on two sides of the ballast, keep loose cord under control

Accessories

1) **Funnel** directs the UV source to a specific area, 2) **Visor** shields the user from blue haze emitted from the lamp, 3) **Finger Guard** blocks fingers from touching the bulb and 4) **Exposure Box** for fluorescing small samples

B-100AP with Exposure Box

B-100SP Lamp

The **B-100SP lamp**, a 140-watt longwave, self-ballasted lamp, is UVP's most powerful portable lamp.

- Ballast is built directly into the bulb
- Lamp cord length is 8 ft. (2.44 m)

- The on/off switch is positioned on the handle for easy accessibility
- Perfect for automotive leak detection

***B-100SP** Self-ballasted bulb included with the B-100SP has an average life of 450 to 2000 hours.*

***B-100AP** Uses include science, non-destructive testing and fluorescence inspection.*

***Accessories** from left to right: Finger guard, visor, funnel.*

Dimensions:
B-100AP and AP/R Lamp Head 9.75L x 6 Dia in. (248 x 152mm) Weight: 12.5 lb. (5.6kg)

Ordering Information	
B-100AP 100-watt 365nm longwave Intensity 2 in./10 in. (μW/cm²): 21,700/8,900	95-0127-01 (115V) 95-0127-02 (230V)
B-100AP/R 100-watt 365nm longwave Intensity 2 in./10 in. (μW/cm²): 21,700/8,900	95-0127-06 (115V) 95-0127-07 (230V)
Bulb, Spot Filter/Bezel Assembly	34-0054-01 38-0168-01
Finger Guard Lamp Funnel Lamp Visor Exposure Box	89-0068-01 19-0126-01 19-0125-01 76-0055-01

Ordering Information	
B-100SP 140-watt 365nm longwave Intensity at 2/10 in. (μW/cm²): 11,600/5,000	95-0128-01 (115V) (230V not available)
Bulb Protector Bulb, Self Ballasted Filter/Bezel Assembly	17-0057-01 34-0049-01 38-0168-05
Lamp Visor Lamp Funnel	19-0126-01 19-0125-01

Dimensions:
Lamp Head 9.75L x 6Dia. in. (248 x 152mm)
Weight: 3.14 lb. (1.43kg)

B-100A and B-100A/R Lamps

The **B-100A** High Intensity Lamp features 100 watts of 365nm longwave UV which is excellent for many uses including inspection purposes.

- Manufactured with a scratch-resistant, powder painted aluminum lamp head
- Lamp head is connected to the transformer base by an 8 ft. (2.44 m) cord
- The handle fits into the transformer base allowing the lamp head to rotate a full 360 degrees

***B-100A/R** includes 20 ft. (6.1 m) primary and secondary cords for additional mobility.*

- The **B-100A/R** has the same features as the B-100A plus 20 ft. (6.1 m) primary and secondary cords for additional mobility; cord holders (on two sides of the ballast) keep slack cord under control

B-100Y and B-100YP Lamps

The **B-100Y** and **B-100YP** lamps provide high-contrast light for the semiconductor fabrication industry and fine surface particle detection.

- A yellow filter blocks wavelengths shorter than 500nm and produces three strong mercury lines at 543, 574 and 576nm
- Lamp intensity is so brilliant, particles down to 10 microns are routinely visible
- The lamp handle fits into the transformer base allowing the lamp head to rotate 360 degrees
- B-100Y has scratch-resistant, powder painted aluminum housing, while the B-100YP has a Cool-Touch design

BL-15 UV Inspection Lamp

***BL-15** has a narrow, durable plastic housing and 15' cord.*

Dimensions: 20L x 2Dia in. (508 x 50.8mm)

Weight: 2.5 lb (1.1kg); Cord length: 15 ft.

***B-100A** pistol-grip handle balances the lamp comfortably in the hand.*

Dimensions:

B-100A, B-100A/R: Lamp Head 8.5L x 5.5Dia. in. (216 x 140mm)

Weight: 11.72lb (5.33kg)

Ordering Information	
B-100A 100-watt, 365nm Intensity at 2/10 in. ($\mu W/cm^2$)	95-0044-22 (115V) 95-0044-02 (230V) 21,700/8,900
B-100A/R 100-watt, 365nm Intensity at 2/10 in. ($\mu W/cm^2$)	95-0044-03 (115V) 95-0044-04 (230V) 21,700/8,900
B-100Y 100-watt	95-0044-24 (115V) 95-0044-18 (230V)
B-100YP 100-watt	95-0127-03 (115V) 95-0127-04 (230V)
Bulb, Spot Lamp Guard Lamp Visor (B-100Y, B-100A) Filter/Bezel (B-100YP) Filter/Bezel (B-100A, B-100A/R) Filter/Bezel (B-100Y)	34-0054-01 19-0158-01 19-0124-01 38-0168-02 38-0168-03 38-0168-04

***B-100Y** and B-100YP produce high contrast light for fine surface particle detection.*

Dimensions:

B-100YP: Lamp Head 9.75D x 6Dia in. (248 x 152mm)
B-100Y: Lamp head 8.5L x 5.5Dia. in. (216 x 140mm)

The BL-15 longwave 365nm BLB UV lamp is ideal for inspection applications in hard to reach places.

- The lamp has a long, narrow housing that is lightweight for easy handheld use
- Two adjustable hooks are included

Ordering Information	
BL-15 (not CE) Replacement Tube, 15-watt	95-0130-01 (115V) 34-0017-01

UV Display and Bench Lamps

225D Mineralight Lamps

- **Mineralight® 225D Display Lamps** provide hours of UV illumination for fluorescence, sterilization or inspection applications with 25-watt UV
- The lamp is manufactured with adjustable handles and mounting brackets for hanging the lamp

UVGD Mineralight Lamp

- **UVGD-68** quartz shortwave UV grid lamp is rated at 20,000 hours of use with unlimited on/off capability
- The UVG Long-Life Filter is included
- Excellent for large gem and mineral displays

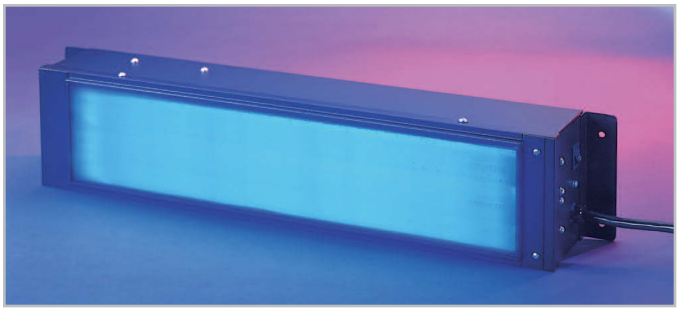
***UVGD-68** uses a high intensity, shortwave (254nm) quartz grid lamp.*

XX-Series UV Bench Lamps

Blak-Ray® **XX-Series bench lamps** - longwave (365nm), BLB (black light) or midrange (302nm) UV and Mineralight® (shortwave 254nm) bench lamps are available in a selection of 15, 20 and 40-watt housings.

- Durable aluminum housings are painted with a scratch resistant powder finish
- Lamp uses include sterilization, NDT, fluorescence display, as well as benchtop inspection stations

***XX-15S Lamp** shown with brackets for downward illumination of a work area.*



***225D 25-Watt Mineralight Display Lamps** can be mounted by brackets for overhead use.*

225D Lamp Dimensions:

18.5L x 4.5W x 3.5H in. (470 x 114 x 89mm); **Weight**: 10 lb (4.6 kg)

UVGD-68 Dimensions:

18.5L x 4.75W x 5H in. (470 x 114 x 89mm) **Weight**: 10 lb (4.6 kg)

Ordering Information	
UVL-225D 365nm UV, 25-watt Replacement Tube	95-0190-01 (115V) 95-0190-02 (230V) 34-0060-01
UVS-225D 254nm UV, 25-watt Replacement Tube	95-0191-01 (115V) 95-0191-02 (230V) 34-0073-01
UVLS-225D 365nm/254nm UV, 25-watt Replacement Tube 365nm Replacement Tube 254nm	95-0192-01 (115V) 95-0192-02 (230V) 34-0060-01 34-0073-01
UVM-225D 302nm UV, 25-watt Replacement Tube	95-0189-01 (115V) 95-0189-02 (230V) 34-0072-01
UVGD-68 254nm UV grid Replacement grid	95-0026-07 (115V) 95-0026-08 (230V) 77-0001-04

UV blocking eyewear is critical for anyone using UV.
See page 7 for UV blocking eyewear.

***XX-Series Lamps** are available in 15-watt, 20-watts and 40-watt models.*

XX Series shortwave bench lamps use 254nm UV as a reliable and effective tool for decontamination in hospitals, research labs, pharmaceutical labs and clinics. Work areas and equipment can become contaminated with bacteria which may be passed via the air or by hand, infecting research projects and workers. Once the micro-organism is determined and how much energy is needed, divide the energy required (in units mW/cm² at 12 in. for the XX-15S) to calculate the total exposure time required to do the job.

- Place the lamp in an upward facing position for purifying air or facing downward for sanitizing work surfaces
- Shortwave (254nm) ultraviolet can kill up to 99% of bacteria, mold spores, yeast and germs
- The UV intensity can be increased by bringing the lamp closer to object being sterilized

XX-15 Lamp Accessories

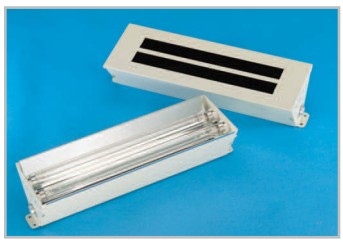
XX-15 lamp models can be attached to the **Exposure Stand** for exposure of materials to ultraviolet. Shelf is adjustable to set distances from the UV source.

***Exposure Stand** shelf is adjustable to different levels for exposure of samples.*

Stand Dimensions:

20W x 6D x 13H in. (508 x 152 x 330mm)

Weight: 8 lb (3.6 kg)



Optional UV transmitting filter for the XX-15S allows use for fluorescence applications.

***Filter Cover** can be attached to the XX-15S lamp.*

Ordering Information	
XX-15S 254nm UV, 15-watt Replacement Tube	95-0042-05 (115V) 95-0042-09 (230V) 34-0008-01
XX-15M 302nm UV, 15-watt Replacement Tube	95-0042-08 (115V) 95-0042-15 (230V) 34-0039-01
XX-15L 365nm UV, 15-watt Replacement Tube	95-0042-07 (115V) 95-0042-13 (230V) 34-0009-02
XX-15 BLB 365nm BLB UV, 15-watt Replacement Tube	95-0042-06 (115V) 95-0042-11 (230V) 34-0017-01
XX-20S 254nm, 20-watt Replacement Tube	95-0045-07 (115V) 95-0045-08 (230V) 34-0067-01
XX-20 BLB 365nm BLB UV, 20-watt Replacement Tube	95-0045-04 (115V) 95-0045-05 (230V) 34-0068-01
XX-40S 254nm, 40-watt Replacement Tube	95-0043-07 (115V) 95-0043-08 (230V) 34-0067-02
XX-40 BLB 365nm BLB UV, 40-watt Replacement Tube	95-0043-04 (115V) 95-0043-05 (230V) 34-0068-02
Clear Cover (XX-15 BLB)	19-0140-01
Filter Cover (XX-15S)	38-0172-02
XX-15 Stand	18-0062-01

Dimensions:

XX-15: 19.75L x 6W x 4.25H in. (502 x 152 x108mm)
Weight: 5 lb (2.3kg)

XX-20: 24L x 6W x 4.25H in. (610 x 152 x 108mm)
Weight: 10 lb (4.5 kg)

XX-40: 49.6L x 6W x 4.25H in. (1260 x 152 x 108mm)
Weight: 20 lb (9.0 kg)

Blak-Ray® Fluorescent Inks

These **Fluorescent Inks** are ready-made and suited for use on many surfaces including skin, fabric and porous or textured materials. RI-10 and RI-20 inks are used for re-admittance at events. See pages 3-10 for selection of longwave lamps.

- Inks are economical
- Simple to use
- Inks are non-toxic

	Part Numbers	Normal Color	Fluorescent Color	Used For	Used On	Applied By
Readmittance (Porous)	**RI-10 Ink** 96-0021-04 Qty: 12 pt./case	Colorless Alcohol Base	Blue	Textile Marking	Skin or Fabric	Felt Pen, Stencil, Stamp and Pad, Brush, Automatic Marker, Roller
Readmittance (Porous)	**RI-20 Ink** 96-0021-05 Qty: 12 pt./case	Faint Yellow Alcohol Base	Green	Textile Marking	Skin or Fabric	Felt Pen, Stencil, Stamp and Pad, Brush, Automatic Marker, Roller
Printing (Non-Porous)	**A-946 Ink** 96-0057-04 Qty: 1 pt.	Colorless Solvent Base	Blue	Industrial Coding, Theatrical, Coupons, Security Printing, Raffle Tickets, Inventory Control, Advertising	Aluminum, ABS, Acrylic, Rubber, Cellulose Acetate, Formica, Nylon, Polystyrene, Polyethylene	Roller, Felt Pen Stamp and Pad, Automatic Marker, Flexographic, Rotogravure, Brush

Chromato-Vue® Viewing Cabinets

Chromato-Vue Viewing Cabinets provide a darkroom environment for UV illumination of materials. Large high performance cabinets are designed for chromatography, non-destructive testing (NDT), inspection, quality control and other applications. Compact cabinets are available for small viewing minerals and for educational uses.

High Performance UV Cabinets

C-75 UV Cabinet

High intensity 15-watt shortwave (254nm) and longwave (365nm) UV tubes are positioned on two sides of the **C-75** Chromato-Vue Cabinet, providing overhead UV illumination for many applications including fluorescence studies and non-destructive testing.

- Power switches are conveniently placed for operating the UV and interior white light
- A lightweight curtain blocks exterior light from the cabinet interior
- Soft rubber viewport provides a comfortable viewing area with adequate space for glasses

Ordering Information	
C-75 Large UV Viewing Cabinet 254/365nm UV	95-0253-01 (115V) 95-0253-02 (230V)

Replacement Tubes	
15-watt tube, 365nm	34-0009-02
15-watt tube, 254nm	34-0008-01

C-70 and C-71 UV Cabinets

The **C-70 and C-71** Chromato-Vue UV viewing cabinets feature a removable bottom panel so the cabinet may be placed over large samples or a transilluminator. These cabinets are made of durable, lightweight plastic.

***C-70G** UV Cabinet includes two each of 15-watt shortwave and longwave UV tubes mounted inside the cabinet; **C-71** has four 15-watt longwave tubes*

***C-75 Large UV Cabinet** features shortwave and longwave plus interior white light.*

Dimensions C-75:

Interior: 17W x 14D x 6.6H in. (432 x 356 x 167mm)
Exterior: 19.75W x 16.5D x 15.75H in. (502 x 419 x 400mm)
Weight: 18 lb (8 kg)

Ordering Information	
C-70G Large Viewing Cabinet with 254/365nm UV	95-0020-04 (115V) 95-0020-05 (230V)
C-71 Large Viewing Cabinet with 365nm UV	95-0022-01 (115V) 95-0022-02 (230V)

Replacement Tubes	
15-watt tube, 365nm	34-0009-02
15-watt tube, 254nm	34-0008-01

- The **C-70G** Chromato-Vue Cabinet includes two each of 15-watt shortwave (254nm) and longwave UV
- The **C-71** has four 15-watt, longwave (365nm) UV tubes on one side of the unit
- Control switches enable selection of the UV wavelengths or the interior overhead white light
- Easy access to the cabinet interior is via the curtain which also blocks ambient light
- Longwave UV provides brilliant fluorescence for uses such as non-destructive testing and document verification
- Shortwave UV can be used for sterilization, document examination and TLC applications
- Chromato-Vue cabinets include a soft rubber viewport and contrast control filter

Dimensions:

Interior: 21W x 13D x 8H in. (533 x 330 x 203mm)
Exterior: 23.4W x 15.8D x 13H in. (594 x 401 x 330mm)
Weight: 22 lb (10.3 kg)

Mini UV Viewing Cabinets

The mini Chromato-Vue® UV Viewing Cabinets are designed with a metal base and plastic top. The **C-15G** cabinet includes a UVGL-58 UV lamp. Lamps for other mini cabinets are ordered separately.

- The bottom panel of the cabinet is removable
- The lamp fits snugly on top of the cabinet
- A contrast control filter absorbs UV energy and protects the eyes
- Soft rubber viewport provides a comfortable viewing area with space for eyeglasses
- Lightweight access curtain blocks out external light from the cabinet interior

C-15G Mini UV Cabinet *Combines the C-10 Cabinet with UVGL-58 multi-band lamp with shortwave and longwave.*

C-10E4 Mini UV Cabinet *Designed for use with the 4-watt EL Series Lamps (see pages 4 - 5).*

C-10P Mini UV Cabinet *accommodates the 6-watt Rechargeable Lamps which are excellent for field use applications (see page 6 for Rechargeable Lamps).*

Mini Cabinet Dimensions:
Interior: 8.75L x 10W x 7H in. (222 x 254 x 178mm)
Exterior: 9L x 10.5W x 12H in. (229 x 267 x 305mm)

Ordering Information	
C-10 Mini Cabinet for 4 and 6-watt PL Series UV Lamps	95-0072-01
C-10P Mini Cabinet for 6-watt Portable Rechargeable Lamps	95-0072-02
C-10E4 Mini Cabinet for 4-watt EL Lamps	95-0072-08
C-10E6 Mini Cabinet for 6-watt EL Lamps	95-0072-09
C-15G Mini Cabinet with UVGL-58 UV Lamp	95-0072-06 (115V) 95-0072-07 (230V)

Multifunctional UV Cabinet

C-65 Chromato-Vue Cabinet accommodates one or two EL Series 8-watt lamps ordered separately. Several lamps are listed below. For additional lamps, see pages 4 - 5. Use of two lamps illuminates the interior uniformly from two sides of the cabinet.

- The bottom panel of the cabinet is removable
- Includes an interior overhead white light
- Access curtain blocks ambient light

Ordering Information	
C-65 Mid-Size UV Viewing Cabinet	95-0257-01 (115V) 95-0257-02 (230V)

C-65 Dimensions:
Interior: 17L x 14W x 6H in. (533 x 330 x 400mm)
Exterior: 19.75L x 16.5W x 15.75H in. (602 x 419 x 400mm)

EL Series 8-watt lamps can be used with the C-65 cabinet or removed for handheld use (see p. 4-5 for more EL Lamps).

- Lamps are made with a durable, scratch-resistant metal
- Lamps include a universal plug, which connects directly to the C-65 Cabinet, plus a supplementary power cord for use of the lamp separately from the cabinet

C-65 UV Cabinet *is designed to accommodate one or two of the EL Series 8-watt Lamps*

Ordering Information - EL Lamps	
UVL-28 365nm/365nm UV	95-0248-01 (115V) 95-0248-02 (230V)
UVS-28 254nm/254nm UV	95-0249-01 (115V) 95-0249-02 (230V)
UVLS-28 (2UV) 365nm/254nm UV	95-0201-01 (115V) 95-0201-02 (230V)
UVLMS-38 (3UV) 365nm/302nm/254nm UV	95-0252-01 (115V) 95-0252-02 (230V)

Pen-Ray® Light Sources

Pen-Ray Mercury Lamps

Pen-Ray light sources are low-pressure, cold cathode mercury UV lamps made of double bore quartz tubing. The lamps are individually created by master craftsmen to ensure quality and reliability. The lamps supply a high degree of stable, isolated spectral line accuracy and long life (3000+ hours). A variety of lighted lengths and wavelengths are available. Lamp uses are numerous because of their convenient small size and positioning of both electrodes at one end only.

Applications for Pen-Ray Lamps include:

- Ozone production
- Barcode reading
- Sterilization
- Fluorescent inspections
- Photochemical reactions
- Interferometry
- Chromatography
- Photometric and fluorometric instruments
- Spectroscopic wavelength calibration
- Monochromatic sources for optical systems

***Pen-Ray Lamps** are available with a variety of lighted lengths and diameters, wavelengths, phosphor and handle.*

Pen-Ray Lamp Variables. Lamp cord/connectors: 16 in. (406mm) with standard connector; different cable lengths, handles, connectors available.

Power supplies. Optimum starting and operation of the lamps. Use the recommended power supplies (ordered separately).

Filter shields. Optional shields direct or modify the emission output for 11SC-1 series lamps:

- Shield A provides a 0.04 in. ID hole
- Shield B has 0.31 x 0.63 in. window
- Shield C has a 0.19 x 1.5 in. window

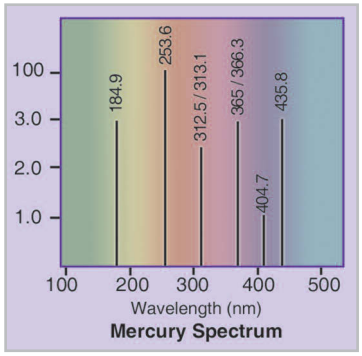
Ordering Information and Specifications			Lamp Dimensions					Recommended Power Supplies/Specifications			
Part Number	Model Description	Peak Emission (nm)	Lighted Length (mm)	Quartz Diameter (mm)	Handle Diameter (mm)	Overall Lamp Length (mm)	Cord Length (mm)	AC Power Supply	DC Power Supply/ Current	Maximum Nominal Starting Voltage	Nominal Operating Voltage
90-0001-04	11SC-0.88-AVP302-2 Hg	302	22.3	9.2	11.2	79.5	76.20	PS-1	PS-6/18mA	1000	225
90-0001-05	11SC-2.25-AV-16-800 Hg	254	57.2	9.2	11.2	114.3	406.4	PS-1	PS-6/18mA	800	200
90-0003-01	11SC-2.12-AO-16 Hg	254	53.8	6.5	9.5	117.3	406.4	PS-1	PS-6/18mA	800	400
90-0004-01	3SC-9.00-AO-16S	254	228.6	9.5	12.7	295.1	406.4	PS-4	PS-6/28mA	1500	680
90-0004-07	3SC-6.00-AO-16 Hg	254	152.4	9.5	12.7	218.9	406.4	PS-4	PS-6/28mA	800	480
90-0012-01	11SC-1 2.12-PO-16 Hg	254	53.8	6.5	9.5	117.3	406.4	PS-1	PS-6/18mA	800	400
90-0019-01	11SC-1L 2.25-PB-16 Hg	351	57.1	6.5	9.5	117.3	406.4	PS-1	PS-6/18mA	800	400
90-0019-04	11SC-1 2.25-PB-16-800Hg	351	57.1	6.5	9.5	117.3	406.4	PS-1	PS-6/18mA	800	220
90-0019-06	11SC-1 3.75-PL351-16 Hg*	351	95.3	6.5	9.5	155.4	406.4	PS-1	PS-6/18mA	1000	350
90-0020-01	11SC-2.75-PO-16 Hg	254	19.1	6.5	9.5	82.6	406.4	PS-1	PS-6/18mA	800	220
90-0033-01	11SD-0.94-AV-6T Hg*	254	23.8	9.2	11.2	72.1	152.4	PS-1	PS-6/18mA	800	200

* Ozone free

Lamp Spectra

The graph illustrates the relative emission intensities of mercury Pen-Ray lamps.

***Spectral charts** and data can be obtained from UVP.*



Pen-Ray Grid Lamps

Grid lamps emit a 254nm mercury emission spectra and are made with standard or ozone free quartz. Grids supply excellent uniformity over the entire area. Sizes available from 2 x 2" to 12 x 12". Custom reflectors and configurations are available. Recommended power supplies are PS-4 and PS-8.

Contact UVP for specifications or ordering information.

Pen-Ray Rare Gas Lamps

Rare gas lamps incorporate the Pen-Ray lamp body but replace the mercury for other reactive ingredients. Gases available are argon, krypton, neon, neon-mercury and xenon. Ask UVP about other gas combinations. A recommended power supply (order separately) is noted for each lamp.

***Rare Gas Lamp** are available with Argon, Krypton, Neon or Xenon fills.*

Ordering Information / Specifications			Dimensions					Recommended Power Supplies			
Part Number	Model Description	Gas Fill	Lighted Length (mm)	Quartz Diameter (mm)	Handle Diameter (mm)	Overall Lamp Length (mm)	Cord Length (mm)	AC Power Supply	DC Power Supply/ Current	Maximum Nominal Starting Voltage	Nominal Operating Voltage
90-0013-01	11AC-2.12-PO-16	Argon	53.8	6.5	9.5	117.3	406.4	PS-3	PS-6/10mA	1000	450
90-0014-01	11KC-2.12-PO-16	Krypton	53.8	6.5	9.5	117.3	406.4	PS-3	PS-6/10mA	1000	450
90-0015-01	11NC-2.12-PO-16	Neon	53.8	6.5	9.5	117.3	406.4	PS-3	PS-6/10mA	1000	450
90-0016-01	11CC-2.12-PO-16	Neon/ Mercury	53.8	6.5	9.5	117.3	406.4	PS-1	PS-6/10mA	1000	500
90-0017-01	11XC-2.12-PO-16	Xenon	53.8	6.5	9.5	117.3	406.4	PS-2	PS-6/6mA	1000	500

Pen-Ray Power Supplies

Pen-Ray Lamps operate on AC current. For certain systems it may be desirable to operate the lamp at higher frequencies than 60 Hz. Lamps can operate satisfactorily at frequencies from 50 Hz to 50 kHz. Lamps using PS-6 operate at the nominal frequency of 38 kHz. Mating recommendations are available to provide optimum energy output from, and maximum life span of, Pen-Ray Lamps.

The power supplies feature a standard lamp current shown in the chart. Power supplies can be ordered with specific ranges and currents. Contact UVP for information.

Specific DC power supplies are designed as open power sources with board only and no housing for placement in other units.

***PS-1 Power supply** (99-0055-01) with lamp connector. PS-2 and PS-3 have the same housing as the PS-1.*

* Board only

** With timer

Part Number	Model	Input Current	Primary Voltage	Lamp Current (mA/AC)	Dimensions L x W x H (mm)
AC INPUT POWER SUPPLIES					
99-0055-01	PS-1	AC	115V/60Hz	18	160 x 94 x 53
99-0055-02	PS-1	AC	230V/50Hz	18	160 x 94 x 53
99-0056-01	PS-2	AC	115V/60Hz	6	160 x 94 x 53
99-0056-02	PS-2	AC	230V/50Hz	6	160 x 94 x 53
99-0057-01	PS-3	AC	115V/60Hz	10	160 x 94 x 53
99-0057-02	PS-3	AC	230V/50Hz	10	160 x 94 x 53
99-0004-01	PS-4	AC	115V/60Hz	26	117 x 147 x 97
99-0004-02	PS-4	AC	230V/50Hz	26	117 x 147 x 97
40-0062-01	PS-8	AC	115V/60Hz	30	256 x 102 x 86
40-0062-02	PS-8	AC	230V/50Hz	30	256 x 102 x 86
99-0033-01	PS-9	AC	115V/60Hz	48	147 x 117 x 92
99-0033-02	PS-9	AC	230V/50Hz	48	147 x 117 x 92
DC INPUT POWER SUPPLIES					
44-0002-01	PS-7*	DC	12V/30kHz	5/10	28 x 56 x 17
99-0076-01	PS-6*	DC	24V/38kHz	18	98 x 89 x 38
99-0077-01	PS-5*	DC	12V/38kHz	18	98 x 89 x 38
99-0065-01	PS-6	DC	24V/38kHz	28	122 x 108 x 51
99-0065-02	PS-6**	DC	24V/38kHz	18	122 x 108 x 51
99-0065-03	PS-6	DC	24V/38kHz	18	122 x 108 x 51
99-0065-04	PS-6**	DC	24V/38kHz	10	122 x 108 x 51
99-0065-05	PS-6	DC	24V/38kHz	10	122 x 108 x 51
99-0065-06	PS-6**	DC	24V/38kHz	6	122 x 108 x 51
99-0065-07	PS-6	DC	24V/38kHz	6	122 x 108 x 51

Pen-Ray Zinc and Cadmium Lamps

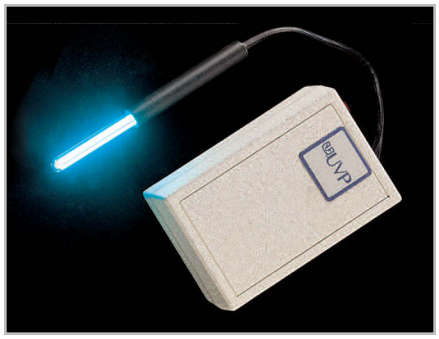
Zinc and cadmium lamps are designed for use with UV absorption cells and detectors. Because of the close proximities of components and high operating temperatures of the lamps, the configuration (lamp body suspended within a vacuum envelope) insulates the lamp from its environment. Zinc lamps can substitute for deuterium lamps due to the zinc lamps' superior thermal stability, long life and prominent 214nm energy peak. Cadmium peak lines are at 229nm and 326nm. Electrical leads are available in either side (radial) or end (axial) configurations.

Ordering Information		Dimensions					Recommended Power Supply		
Part Number	Description	Lead Type Length (mm)	Lighted Length (mm)	Quartz Diameter (mm)	Overall Lamp Length (mm)	Cord Length (mm)	AC Power Supply	Max. Nom. Starting Voltage	Nominal operating Voltage
90-0069-05	Zinc	Radial 203	20	17.8	110	203.0	PS-9	1500	145
90-0069-06	Zinc	Axial 203	20	17.8	110	203.0	PS-9	1500	145
90-0069-07	Zinc	Radial 305	20	17.8	110	305.0	PS-9	1500	145
90-0069-11	Zinc	Axial 432	20	17.8	110	431.8	PS-9	1500	145
90-0071-03	Cadmium	Radial 203	24	17.8	110	203.0	PS-9	1500	145

Pen-Ray Fields Packs

Pen-Ray **Field Packs** combine a light source and a DC power supply (9V battery included) in a compact, portable package. Pack is lightweight (0.3 lbs) and small enough to fit in a pocket. Field Pack FP-LSD provides two interchangeable light sources (365nm and 254nm).

Ordering Information/Specifications			Dimensions			
Part Number	Description	Peak Emission (nm)	Lighted Length (mm)	Quartz Diameter (mm)	Handle Diameter (mm)	Overall Lamp Length (mm)
95-0256-01	Field Pack FP-L	365	44.5	6.5	9.5	108
95-0256-02	Field Pack FP-S	254	44.5	6.5	9.5	108
95-0256-03	Field Pack FP-LSD	254/365	44.5	6.5	9.5	108



Pen-Ray Field Packs *provide a portable UV light source.*

PCQ PhotoChemical Quartz Lamps

PCQ lamps are low pressure and manufactured of high grade mercury quartz. Lamps emit approximately 90% of their radiation at 254nm. The lamps feature a 24-40mm ground glass taper joint and a quartz diameter of 9.5mm (0.375 inches). Ask UVP for details or go to UVP.com.

PhotoChemical Quartz Lamp *details can be found at uvp.com*

Stable Ozone Generators

Stable Ozone Generators (SOG) use photochemical reaction of oxygen and shortwave (185nm) UV to produce a continuous flow of ozone. Ozone generators provide a stable source for water purification, oxidant testing and air pollution studies.

- SOG models use a removable Pen-Ray lamp inserted into the generator box
- Power supply included with the lamp feeds stable power to the lamps for uniform ozone generation

Ordering Information			
Part Number	Model	Ozone Production	Lighted Length
97-0066-01 (115V) 97-0066-02 (220V)	SOG-1	0.8 ppm @ 0.5 L/min.	2 in. (50.8mm)
97-0067-01 (115V) 97-0067-02 (220V)	SOG-2	3.0 ppm @ 1.0 L/min.	9 in. (228.6mm)

Stable Ozone Generators *for calibration of ozone analyzers.*

Housing dimensions:
11L x 3.75W x 1.8H in. (279 x 95.25 x 45.7mm)

UV Intensity Meters

The measurement of the UV irradiance is the most effective way to monitor the useful life of any UV light source. UVP meters ensure maximum operating efficiency of any UV system.

UVX Digital Radiometers

The **UVX Radiometer** is used with one of the three sensors (ordered separately) for measuring shortwave (254nm), longwave (365nm) and midrange (302nm) UV wavelengths.

- Choose from three sensors: UVX-25 shortwave, UVX-31 midrange or UVX-36 longwave
- The UVX range switch provides selection from three intensity ranges:
  - 0 to 20 mW/cm^2
  - 0 to 2000 µW/cm^2
  - 0 to 200 µW/cm^2
- The attenuator extends the reading range up to 200mW/cm^2
- 9-volt battery for up to 120 hours
- A port enables connection to a chart recorder for continuous monitoring

Recalibration of meters and sensors is recommended every six months.

Sensor Cable Length:	3 feet (0.9 m)
Weight:	9.4 oz (0.3 kg)
Display:	3.5 digit LCD
Operating Environment:	Temperature: 0 to 50ºC Humidity: 5% to 90% Relative Humidity
UVX Dimensions:	6.2L x 2H x 3.6W in. (157 x 51 x 91 mm)

J-Series Analog UV Meters

J-Series meters are photovoltaic devices for accurate and repeatable readings of shortwave and longwave UV sources. The durable plastic housing withstands heavy, sustained use.

J-221 Meter measures the intensity of 365nm longwave UV. The sensor is sensitive within a range of 300-400nm with a peak sensitivity at 365nm. Intensity readings are 0-1200 µW/cm^2 (A Scale) and 1000-6000 µW/cm^2 (B Scale). J-221 Meter complies with MIL STD 45662-A.

J-225 Meter measures the intensity of 254nm shortwave UV. The sensor is sensitive within a range of 220-280nm with peak sensitivity at 254nm. Intensity readings at 0-2400 µW/cm^2 (A scale) and 2000-12000 µW/cm^2 (B Scale).

- Self-powered for maximum portability
- Two scales for low and high intensity readings
- A three foot (0.9m) cord connects the sensor to the meter for remote readings
- Infrared filter assures accurate readings when measuring light sources producing infrared radiation
- The 5X attenuation screen can be used for very high intensity lamp measurements
- All meters and sensors are calibrated to meet UVP's published standards and NIST

UVX Radiometer *Select from three UV sensors for measuring UV intensity.*

Ordering Information	
UVX Radiometer	97-0015-02
Attenuator, 10:1	98-0035-01
9V Battery	45-0012-01
UVX-25 Sensor Calibration Point: 254nm Bandpass: 250-290nm	97-0016-01
UVX-31 Sensor Calibration Point: 310nm Bandpass: 280-340nm	97-0016-04
UVX-36 Sensor Calibration Point: 365nm Bandpass: 335-380nm	97-0016-02

J-221 and J-225 Meters *measure UV sources*

Ordering Information	
J-221 Longwave Meter 365nm UV	97-0003-01
J-225 Shortwave Meter 254nm UV	97-0004-01

Dimensions:
3H x 3D x 3W in. (76 x 76 x 76 mm)
Weight: 9 oz (0.25 kg)

UV and HEPA PCR Hoods

UV PCR hoods use shortwave ultraviolet to control PCR contamination. In addition to standard UV PCR models, HEPA/UV PCR systems with three-stage filters are available. Both the HEPA/UV and the standard UV PCR Systems are available in two sizes: Cabinet and Workstation. The Cabinet has a smaller footprint than the Workstation.

Shortwave 254nm UV and antimicrobial coated metal surfaces control contamination

UV PCR Workstation *shown. Smaller footprint, UV PCR Cabinet also available.*

UV PCR Cabinets and Workstations

All PCR hoods include the following features:

- Built-in shortwave (254nm) UV tubes for deactivation of DNA between experiments
- Timer sets UV exposure for up to 30 minutes
- Safety shut-off switch automatically turns the ultraviolet light off when the door is opened
- Keylock prevents accidental exposure of samples to UV
- Easy-clean antimicrobial coating on the metal surfaces resists bacteria growth
- Hinged door flips up for easy access to the work area
- Built-in power outlets for operation of equipment inside the PCR work area
- Two shelves allow placement of small equipment
- Makrolon® panels block UV below 400nm

UV Decontamination. All UVP PCR systems create an ideal environment for PCR preparation by reducing the chance of sample contamination. Control potential PCR contamination with 254nm UV tubes built into the chamber.

Antimicrobial Protection. Additional contamination control is provided with a uniquely coated metal design that maintains antimicrobial efficacy. The easy clean, durable coating material contains silver ions, a safe and natural antimicrobial agent for continuous antimicrobial protection.

UV PCR Ordering Information			
UV PCR Cabinet*	**UV2 PCR Cabinet***	**UV PCR Workstation***	**UV2 PCR Workstation***
95-0437-01 (115V) 95-0437-02 (230V) UK 95-0437-04 (230V) Euro	95-0436-01 (115V) 95-0436-02 (230V) UK 95-0436-04 (230V) Euro	95-0367-01 (115V) 95-0367-02 (230V) UK 95-0367-04 (230V) Euro	95-0439-01 (115V) 95-0439-02 (230V) UK 95-0439-04 (230V) Euro
Light Sources **254nm UV:** Chamber (4 x 8W) **White Light:** Chamber (2 x 8W)	**Light Sources** **254nm UV:** Chamber (4 x 8W) UV/air circulator (1 x 8W) **White Light:** Chamber (2 x 8W)	**Light Sources** **254nm UV:** Chamber (2 x 25W) **White Light:** Chamber (1 x 15W)	**Light Sources** **254nm UV:** Chamber (2 x 25W) UV/air circulator (1 x 8W) **White Light:** Chamber (1 x 15W)
Two power outlets Two small shelves UV Timer (≤ 30 min.) Antimicrobial coated metal Makrolon panels block below 400nm	Two power outlets Two small shelves UV Timer (≤ 30 min.) Antimicrobial coated metal Makrolon panels block below 400nm	Four power outlets Two shelves UV Timer (≤ 30 min.) Antimicrobial coated metal Makrolon panels block below 400nm	Four power outlets Two shelves UV Timer (≤ 30 min.) Antimicrobial coated metal Makrolon panels block below 400nm
Dimensions HWD: 28.7 x 21.4 x 24 in. (729 x 544 x 610mm)		**Dimensions HWD**: 28.7 x 29 x 24 in. (729 x 737 x 610mm)	

Replacement Tubes	
Tube, 8-watt, 254nm UV	34-0007-01
Tube, 8-watt, white	34-0056-01
Tube, 25-watt, 254nm UV	34-0073-01
Tube, 15-watt, white	34-0087-01

*Assembly required.

Makrolon is a registered trademark of Bayer AG.

Optional PCR table accommodates all UVP PCR cabinets and workstations. Table features two rigid and two adjustable, locking casters. Anti-microbial coated stainless steel reduces bacterial growth.

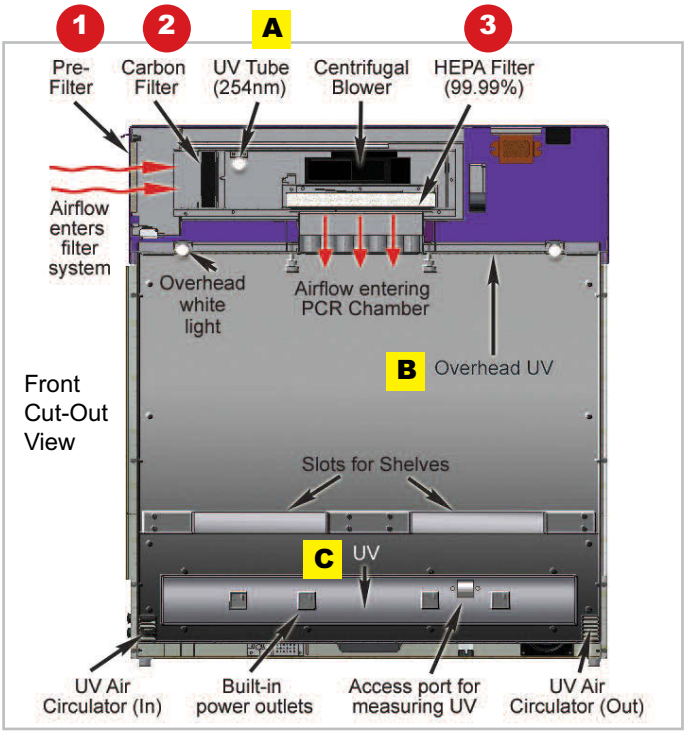
PCR Table
98-0077-01

UV3 HEPA PCR Cabinets and Workstations

UV3 HEPA PCR Systems *(workstation shown) feature three-stage filters, antimicrobial-coated metal surfaces and shortwave UV.*

UV3 HEPA Components:

UV3 HEPA PCR drawing below demonstrates the air flow through the filter system. Only UVP provides three UV sources (UV3) which are indicated in the drawing below: filter area (A), chamber (B) and UV/air circulator (C).



UV Intensity Measurements. As UV tubes age, the intensity and germicidal destruction rates decrease. The lower the tube intensity, the longer the tubes must be illuminated to accomplish the same objective. See page 17 for UV intensity meters.

The UV3 HEPA PCR systems contain the same components as the UV PCR systems plus an additional filter system for maximum contamination control. These systems feature HEPA filters, three UV sources and antimicrobial-coated metal surfaces.

- The UV3 HEPA units use three-stage filters:
  1. Pre-filter helps to preserve the life of other filters by capturing large dust particles.
  2. Carbon filter removes ozone, gases, odor and smoke.
  3. HEPA filter provides a barrier (99.99%) against dust, bacterial and mold down to 0.3 micron particles.
- HEPA duct features antimicrobial-coated metal surfaces that resist bacteria growth
- Side access with a slide out design makes changing filters and UV tube easy
- Duct includes a shortwave (254nm) ultraviolet tube for eliminating airborne microbes
- Honeycomb metal grid provides stabilized airflow into the chamber

UV3 HEPA PCR Ordering Information

UV3 HEPA PCR Cabinet*	**UV3 HEPA PCR Workstation***
95-0434-01 (115V) 95-0434-02 (230V) UK 95-0434-04 (230V) Euro	95-0438-01 (115V) 95-0438-02 (230V) UK 95-0438-04 (230V) Euro
Light Sources **254nm UV:** Filter area (1 x 8W) Chamber (4 x 8W) UV/air circulator (1 x 8W) **White Light:** Chamber (2 x 8W)	**Light Sources** **254nm UV:** Filter area (1 x 8W) Chamber (2 x 25W) UV/air circulator (1 x 8W) **White Light:** Chamber (2 x 8W)
Three stage filters: Pre-filter Carbon filter HEPA filter	**Three stage filters:** Pre-filter Carbon filter HEPA filter
Features include: Two power outlets Two small shelves UV timer (≤ 30 min.) Antimicrobial coated metal Makrolon® panels block below 400nm	**Features include:** Four power outlets Two shelves UV timer (≤ 30 min.) Antimicrobial coated metal Makrolon panels block below 400nm
Dimensions HWD: 32.5 x 21.4 x 24 in. (826 x 544 x 610mm)	Dimensions HWD: 32.5 x 29 x 24 in. (826 x 737 x 610mm)

*Assembly required.

Makrolon is a registered trademark of Bayer AG.

Replacement Tubes

Tube, 8-watt, 254nm UV	34-0007-01
Tube, 8-watt, white	34-0056-01
Tube, 25-watt, 254nm UV	34-0073-01

Hybridization Ovens

Hybridization ovens are replacing hybridization bags and water baths for procedures involved in Southern, Northern and in situ hybridization. UVP's hybridization ovens provide accurate temperature and rotation speed controls plus variable bottle sizes and offset bottle positioning. The dynamic mixing capability is ideal for creating the optimum conditions needed for cDNA library screenings, primer synthesis and nucleic acid hybridization. The interior stainless steel construction is easy to clean.

Precision heated hybridization ovens

HB-1000 Hybridizer

The **HB-1000 Hybridizer Hybridization Oven** provides uniform temperature and rotation controls for thorough mixing of materials.

HB-1000 Hybridizer *hybridization oven features fast heat-up capability. Units are stackable for maximizing lab space.*

HB-1000 Dimensions: 17.5W x 16H x 15D in. (445 x 406 x 381mm)

- Variable rotary wheel speed control (10 to 15 rpm) enables consistent saturation of samples
- Microprocessor accurately controls temperature
- Large LCD displays the current temperature inside the chamber
- Protective trays removable to allow easy cleanup of spilled media
- RPM knob adjusts speed control of the rotary wheel
- Carousel holds twenty 35 x 150mm bottles, ten 35 x 300mm bottles or combination
- Offset bottle positioning for thorough mixing
- Carousel is removeable for use of the optional rocker tray (stainless steel 12.5W x 10D in.)

Ordering Information

HB-1000 Hybridizer	95-0030-01 (115V)
Hybridization Oven	95-0030-02 (230V)
Heating Element:	1250 Watts
Rotary Wheel Variable Speed:	10 to 15 rpm
Bottle Included:	One 35 x 300mm
Bottle Capacity:	Twenty 35 x 150mm
	Ten 35 x 300mm

HL-2000 HybriLinker™

HL-2000 HybriLinker™ Hybridization Oven combines an HB-1000 Hybridization oven *and* UV Crosslinker (254nm UV) in one unit. The Hybridization Oven and Crosslinker operate independently.

HL-2000 HybriLinker *Hybridization oven and UV Crosslinker in one unit. The oven has the same features as the HB-1000.*

Upper chamber - hybridization oven (same features as HB-1000 including):

- Variable speed control
- Large LCD display
- Stainless steel internal design

Lower chamber - UV crosslinker (see additional details p. 22):

- Shortwave 254nm, 8-watt, ultraviolet tubes
- Preset and manual controls for ultraviolet or time exposures
- Microprocessor measures and controls UV output, ensuring maximum energy efficiency
- Large LCD display continuously displays time or energy settings
- Window on the door allows viewing of the process yet blocks UV radiation

HL-2000 Dimensions: 17.5W x 24H x 15D in. (445 x 610 x 381mm)

Ordering Information

HL-2000 HybriLinker	95-0031-01 (115V)
Hybridization Oven/Crosslinker	95-0031-02 (230V)
Upper Chamber Oven:	
Heating Element:	1250 Watts
Rotary Wheel Variable Speed:	10 to 15 rpm
Bottle Included:	One 35 x 300mm
Bottle Capacity:	Twenty 35 x 150mm
	Ten 35 x 300mm
Lower Chamber Crosslinker:	
UV Light Source:	254nm UV

Temperature Settings: HB-1000 and HL-2000 Ovens

Temperature:	Ambient +10°C to 99.9°C	
Temperature Stability:	Inside Oven:	±0.3°C to 68°C
	Inside Bottles:	±0.1°C to 68°C
Temperature Uniformity:	Inside Oven:	±0.1°C to 68°C
	Inside Bottles:	±0.1°C to 68°C

See next page for **accessories** available with the HB-1000 and HL-2000 hybridization ovens.

HM-4000 Multidizer™

HM-4000 Multidizer Hybridization Oven is designed with two separate chambers offering several motion functions: shaking, orbital rocking and rotating all in one unit. Two chambers operate independently and allow hybridization and blotting procedures requiring different containers, motions or temperature settings.

Lower chamber:

- Variable speed control in lower chamber and other features are the same as the HB-1000
- Multiple bottle sizes and offset bottle positioning

Upper chamber:

- Uses a roller action to operate the shaker tray (included) or optional acrylic carousel or orbital tray
- Shaker tray is designed for placement of flasks or other containers

Ordering Information	
HM-4000 Hybridizer Hybridization Oven	95-0340-01 (115V) 95-0340-02 (230V)

Upper Chamber	
Temperature Range:	Ambient +10°C to 80°C (stability/ uniformity same as HB-1000)
Heating Element:	500 Watts
Shaker Tray Dimension:	10W x 6D in. (254 x 152mm)
Shaker Tray Speed:	54 - 106 cycles/min.
Carousel Rotation:	12 - 20 rpm

Lower Chamber	
Temperature Range:	Ambient +10°C to 99.9°C (stability/ uniformity same as HB-1000)
Heating Element:	1250 Watts
Rotary Wheel Variable Speed:	10 - 15 rpm
Bottle Capacity:	Twenty 35 x 150mm Ten 35 x 300mm
Bottle Included:	One 35 x 300mm with HM-4000

Orbital Motional Tray *(optional) plugs into the hybridization oven for use with flasks and other vessels. External stand-alone tray available; contact UVP for ordering information.*

HM-4000 Multidizer *Two compartments operate independently with shake, rock, roll and rotate motions*

HM-4000 Dimensions:
17.5W x 28.5H x 15D in. (445 x 725 x 381mm)

Hybridization Oven Accessories	
Bottle, small, 35 x 150mm Bottle, large, 35 x 300mm	07-0194-01 07-0194-02
Rocker Tray (HM-4000, HL-2000, HB-1000) 12.5W x 10D in. (318 x 254mm) Tray moves at 7 cycles/min and up to 14 cycles/min on the highest speed	98-0067-03
Orbital Tray (HM-4000, HL-2000, HB-1000) Dimensions: 10.3W x 8D in. (318 x 254mm) Motion: 30 rpm at 2° angle	98-0067-04
Carousel, Acrylic (HM-4000) Rests on rollers, rotate: 10 - 20 rpm Carousel holds up to eight 35 x 150mm; four 35 x 300mm bottles or eight 50ml conicals	76-0089-01
Carousel, Metal fits ten 50ml conicals, replaces rotary wheel (HB-1000, HL-2000, HM-4000)	76-0075-01
Carousel Kit for oversized bottles	76-0066-02

HB-500 Minidizer™

The **HB-500 Minidizer Hybridization Oven** is designed as a personal desktop unit ideal for use in laboratories with low use and space requirements. LCD displays current temperature.

HB-500 Minidizer
Compact and portable, this unit is designed for low throughput use.

HB-500 Dimensions:
9H x 13W x 8D in.
(229 x 330 x 203mm)

Ordering Information	
HB-500 Minidizer Hybridization Oven	95-0330-01 (115V) 95-0330-02 (230V)
Temperature Range: Temperature Accuracy: Temperature Uniformity: Heating Element: Speed: Bottle Capacity:	Ambient +10°C to 80°C ±0.5°C at 78°C ±0.1°C at 68°C 500 Watts 12 rpm Four 35 x 150 mm or Four 50 ml or Eight 15 ml

- Rotation speed set at 12 rpm
- Easy-clean stainless steel interior
- 3/8" thick β-blocking acrylic cover
- Cover swings open for easy access to the carousel

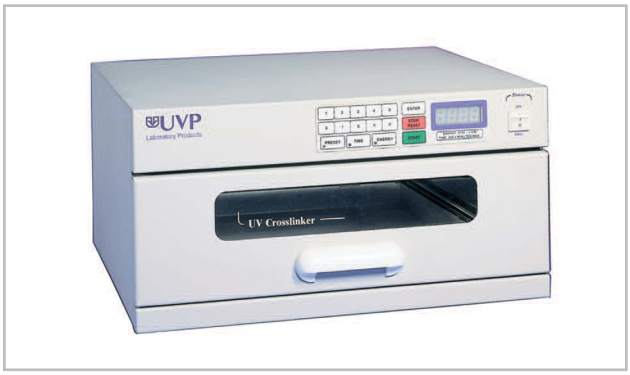
UV Crosslinkers and UV Translinker

UV Crosslinkers

UV Crosslinkers assure consistent UV output for many uses including DNA bonding and UV curing. UV crosslinking is used for attaching nucleic acids to a membrane for example which takes seconds as compared to oven baking. The crosslinkers utilize a microprocessor to control and measure the dose of UV radiation.

CL-1000 Crosslinker *is an exposure instrument which uses shortwave UV energy to bond DNA to a medium.*

- Preset and manual controls for ultraviolet or time exposures
- Factory presettings deliver 120,000 microjoules or two minutes of exposure; maximum UV energy setting of 999,900 microjoules per cm^2
- Microprocessor optimizes the use of energy while ensuring consistent, maximum energy efficiency and output
- Large LCD display
- Window on the door allows viewing of the process yet blocks UV radiation
- Five 8-watt ultraviolet tubes emit uniform overhead UV illumination



CX-2000 *features a pull-out drawer and shortwave UV. The CX-2000 operates with the same functions as the CL-1000 Crosslinker.*

CX-2000 Dimensions: Exterior: 15D x 17.5W x 9.75H in. (445 x 229 x 381mm); Interior: 11.3D x 11.4W x 3.6H in. (290 x 287 x 91mm)

CL-1000 Dimensions: Exterior: 13.7D x 15.6W x 8.75H in. (248 x 396 x 222mm); Interior: 12D x 10W x 5H in. (305 x 254 x 127mm)

Ordering Information	
CL-1000 Crosslinker 254nm UV Replacement Tube	95-0174-01 (115V) 95-0174-02 (230V) 34-0007-01
CL-1000L Crosslinker 365nm UV Replacement Tube	95-0228-01 (115V) 95-0228-02 (230V) 34-0006-01
CL-1000M Crosslinker 302nm UV Replacement Tube	95-0230-01 (115V) 95-0230-02 (230V) 34-0042-01
CX-2000 Crosslinker 254nm UV Replacement Tube	95-0339-01 (115V) 95-0339-02 (230V) 34-0007-01
TL-2000 Translinker 254nm Crosslinker/ 302nm Transilluminator with Filter Size of 20x20cm Replacement Tube, 254nm Replacement Tube, 302nm	95-0300-01 (115V) 95-0300-02 (230V) 34-0007-01 34-0042-01

TL-2000 Translinker

TL-2000 Translinker combines the shortwave UV CL-1000 Crosslinker (specifications above) and the M-20 transilluminator. The transilluminator is built onto the crosslinker cabinet.

- On/Off controls for the transilluminator are located on the crosslinker panel
- The transilluminator uses midrange 302nm UV and a 20x20cm filter

TL-2000 Dimensions:

External: 13.7D x 19W x 12.75H in. (348 x 483 x 324mm)
Internal: 12D x 10W x5H in. (305 x 254 x 127mm)
Weight: 36 lb (16.4 kg)

Translinker *features a UV crosslinker and transilluminator.*

Transilluminators

All UVP transilluminators provide back-illumination of transparent fluorescent materials. UV Transilluminators are equipped with an UV blocking cover to shield the user from UV. The transilluminator base is painted with a high-quality, scratch-resistant powder coat. Models include either a stainless steel top assembly or powder coat paint.

FirstLight® Uniform UV Illuminator

The **FirstLight** represents a unique, highly uniform 302nm UV excitation source for quantitative fluorescent imaging in a wide range of applications.

- Produces <5% coefficient of variance (CV) across the full filter area
- Exceptionally uniform, edge-to-edge illumination
- Accurate gel-to-gel comparisons
- Uniformity ensures consistent illumination over the imaging surface, resulting in high quality images

Ordering Information	
FI-26X, 302nm UV Filter Size 25 x 26cm	95-0364-01 (115V) 95-0364-02 (230V)
FI-20, 302nm UV Filter Size 20 x 20cm	95-0365-01 (115V) 95-0365-02 (230V)
FI-26, 302nm UV Filter Size 21 x 26cm	95-0366-01 (115V) 95-0366-02 (230V)

Dimensions: 11D x 14W x 5.63H in. (279 x 356 x 143mm) Height includes UV blocking cover

FirstLight UV Illuminator *with its unique design (patented) provides uniform UV illumination, which is critical for accurate quantitative analysis*

Achieve accurate and reproducible RNA and DNA protein results. The FirstLight emits 302nm UV excitation and combines with a patented phosphor coating configuration to generate exceptionally uniform UV illumination over each band and lane. Multiple gels may be placed on the surface with assurance of uniformity for each gel.

Additional Wavelengths: When other wavelengths are required for fluorescence of various stains, optional plates convert the transilluminator's 302nm to 365nm, 460-470nm or white light. See page 27 for ***converter plates***.

FirstLight and 3UV models are patented and available only from UVP!

Benchtop UV Transilluminators

Benchtop Transilluminators are equipped with 8-watt tubes and a variety of filter sizes.

3UV™ Benchtop Models

Unique 3UV benchtop models *include 254, 302 and 365nm UV wavelengths in one unit.*

Replacement Tubes (for Benchtop models)	
Tube, 8-watt, 254nm UV	34-0007-01
Tube, 8-watt, 302nm UV	34-0042-01
Tube, 8-watt, 365nm UV	34-0006-01

UVP's patented **3UV Benchtop Transilluminator** allows selection of 8-watt longwave, midrange or shortwave in one compact unit.

- View gels using longwave UV for extended periods of time, reducing photonicking damage
- Switch to 302nm to increase the fluorescence for photodocumentation
- Use shortwave to irradiate samples
- Compact size is an alternative to larger High Performance UV Transilluminators
- Stainless steel filter assembly

Ordering Information	
LMS-20 Single Intensity 254/302/365nm UV Filter Size 20 x 20cm	95-0417-01 (100-115V) 95-0417-02 (230V)
LMS-26 Single Intensity 254/302/365nm UV Filter Size 21 x 26cm	95-0414-01 (100-115V) 95-0414-02 (230V)

Dimensions: 11D x 14W x 5.4H in. (279 x 356 x 137mm) Height includes UV blocking cover.

2UV™ Benchtop Transilluminators

The **2UV models** allow users to switch between 302nm and 365nm UV wavelengths in one unit.

- A single intensity setting and 8-watt UV tubes
- Select from 20x20 or 21x26cm filter areas

2UV Models - Ordering Information	
LM-20 Single Intensity 302/365nm UV Filter Size 20 x 20cm	95-0449-01 (100-115V) 95-0449-02 (230V)
LM-26 Single Intensity 302/365nm UV Filter Size 21 x 26cm	95-0459-01 (100-115V) 95-0459-02 (230V)
LS-26 Single Intensity 254/365nm UV Filter Size 21 x 26cm	95-0566-01 (100-115V) 95-0566-02 (230V)

Single Intensity and Variable Intensity Benchtop Models

***Variable Intensity Models** feature adjustable intensity with selection of high, medium and low settings.*

Replacement Tubes	
Tube, 8-watt, 254nm UV	34-0007-01
Tube, 8-watt, 302nm UV	34-0042-01
Tube, 8-watt, 365nm UV	34-0006-01

Mini Benchtop Transilluminator

Mini benchtop M-10E is an economical transilluminator using 6-watt, 302nm tubes. This model is excellent for educational purposes.

Dimensions:

7.25D x 10.25W x 4.5H in. (184 x 260 x 114mm) Height includes UV blocking cover. Weight: 7.7 lb. (3.5 kg)

3UV, 2UV, Single UV and Variable Intensity Benchtop models (except Mini) feature increased performance and efficiency with an electronic ballast. This design produces higher UV intensity and uniformity plus instant start up.

Benchtop models include the economical, compact **single intensity and variable intensity transilluminators** which are equipped with 8-watt, 302nm UV tubes. The variable intensity models feature:

- **High** setting allows UV excitation of fluorophores on gels for routine photography. Also excites gels with low sample concentration.
- **Medium** intensity setting is excellent for viewing and quick single-band excision.
- **Low** setting is used for positioning and preparation of the gel, excising multiple bands and focusing for photography purposes.

Single & Variable Models - Ordering Information	
M-15 Single Intensity 302nm UV, Filter 15 x 15cm	95-0455-01 (100-115V) 95-0455-02 (230V)
M-15V Variable Intensity 302nm UV, Filter 15 x 15cm	95-0456-01 (100-115V) 95-0456-02 (230V)
M-20 Single Intensity 302nm UV, Filter 20 x 20cm	95-0447-01 (100-115V) 95-0447-02 (230V)
M-20V Variable Intensity 302nm UV, Filter 20 x 20cm	95-0452-01 (100-115V) 95-0452-02 (230V)
M-26 Single Intensity 302nm UV, Filter 21 x 26cm	95-0457-01 (100-115V) 95-0457-02 (230V)
M-26V Variable Intensity 302nm UV, Filter 21 x 26cm	95-0458-01 (100-115V) 95-0458-02 (230V)
M-26XV Variable Intensity 302nm UV, Filter 25 x 26cm	95-0413-01 (100-115V) 95-0413-02 (230V)

Dimensions of 2UV, Single and Variable Intensity Models:

11D x 14W x 4.8H in. (279 x 356 x 122mm) Height includes UV blocking cover. Weight: 12.7 lb. (5.79 kg)

For Gel Tools and Converter Plates, see page 27.

Mini M-10E - Ordering Information	
M-10E Single Intensity 302nm UV, Filter Size 10 x 10cm	95-0180-01 (115V) 95-0180-02 (230V)
Tube, 6-watt, 302nm	34-0044-01

High Performance UV Transilluminators

All **High Performance UV Transilluminators** include exclusive 25-watt ultraviolet tubes which provide a total of 100-watts of brilliant UV illumination.

- Deliver high UV output and intensity, no light flicker, fast lamp start-up and reduced electrical consumption
- Stainless steel frame enables easy cleaning
- The back-lit UV illumination is further enhanced with UVP's UVG long-life filter and uniformity screen
- The UV blocking cover, included with each transilluminator, is adjustable for access to the filter area

Single Wavelength UV Transilluminators

These models supply a single UV wavelength. The ordering information chart below shows the filter sizes available.

Variable Intensity UV Transilluminators

- Choose a model with shortwave (254nm), midrange (302nm) or longwave (365nm) UV for high fluorescence and sensitivity of stained gels
- Variable intensity allows the researcher to select high, medium or low settings

Single or Variable Intensity - Ordering Information	
TFM-20V Variable Intensity 302nm UV Filter Size 20 x 20cm	95-0423-01 (100-115V) 95-0423-02 (230V)
TFM-26V Variable Intensity 302nm UV Filter Size 21 x 26cm	95-0422-01 (100-115V) 95-0422-02 (230V)
TFM-30V Variable Intensity 302nm UV Filter Size 25 x 30cm	95-0424-01 (100-115V) 95-0424-02 (230V)
TFM-40V Variable Intensity 302nm UV Filter Size 20 x 40cm	95-0421-01 (100-115V) 95-0421-02 (230V)
TFL-40V Variable Intensity 365nm UV Filter Size 20 x 40cm	95-0420-01 (100-115V) 95-0420-02 (230V)
TFS-20V Variable Intensity 254nm UV Filter Size 20 x 20cm	95-0427-01 (100-115V) 95-0427-02 (230V)
TFS-26V Variable Intensity 254nm UV Filter Size 21 x 26cm	95-0428-01 (100-115V) 95-0428-02 (230V)
TFS-30V Variable Intensity 254nm UV Filter Size 25 x 30cm	95-0429-01 (100-115V) 95-0429-02 (230V)
TFS-40V Variable Intensity 254nm UV Filter Size 20 x 40cm	95-0430-01 (100-115V) 95-0430-02 (230V)

Dimensions for all High Performance UV Transilluminators:

13.25D x 19.13W x 5.63H in. (337 x 486 x 143mm)
Height includes UV blocking cover.

TFM-40V High Performance UV Transilluminator *with variable intensity and 20x40cm filter. The hinged UV blocking cover is adjustable to different angles for access to the filter surface.*

Replacement Tubes	
Tube, 25-watt, 254nm	34-0073-01
Tube, 25-watt, 302nm	34-0072-01
Tube, 25-watt, 365nm	34-0060-01

2UV Transilluminators

High Performance 2UV models are the same size and design as other high performance models but are equipped with midrange (302nm) and longwave (365nm) UV in each unit.

2UV High Performance - Ordering Information	
TFML-20 Single Intensity 302/365nm UV Filter Size 20 x 20cm	95-0431-01 (100-115V) 95-0431-02 (230V)
TFML-26 Single Intensity 302/365nm UV Filter Size 21 x 26cm	95-0425-01 (100-115V) 95-0425-02 (230V)
TFML-30 Single Intensity 302/365nm UV Filter Size 25 x 30cm	95-0432-01(100-115V) 95-0432-02 (230V)
TFML-40 Single Intensity 302/365nm UV Filter Size 20 x 40cm	95-0426-01 (100-115V) 95-0426-02 (230V)

Visi-Blue™ Transilluminators

Visi-Blue transilluminators are excellent for use with blue 460-470nm excitation samples including SYBR Green, SYPRO Orange and GFP stains. A special amber camera filter (50mm sq) is included for photography of gels.

- Visi-Blue transilluminators and converter plates minimize photonicking of DNA samples
- The amber protective cover blocks blue light transmission and allows visualization of most samples above 500nm
- **VB-26V** is a compact 8-watt model while the **VB-40V** is a large format 25-watt model

VB-26V Visi-Blue Transilluminator *patented design supplies 460-470nm illumination.*

Ordering Information	
VB-26 8-watt Variable Intensity Filter Size 21 x 26cm Replace. Tube, 365nm BLB	95-0461-01 (100-115V) 95-0461-02 (230V) 34-0031-01
VB-40V 25-watt Variable Intensity Filter Size 20 x 40cm Replace. Tube, 365nm BLB	95-0433-01 (100-115V) 95-0433-02 (230V) 34-0060-01

Dimensions: Height includes amber cover

VB-26V: 11D x 14W x 4.8H in. (279 x 356 x 122mm)
Wt: 15 lb. (6.8 kg)

VB-40V: 13.25D x 19.13W x 5.6H in. (337 x 486 x 143mm)
Wt: 21 lb. (9.6 kg)

White/UV Transilluminators

White/UV transilluminators have 20 x 20cm white light and UV filter areas side by side for illumination of multiple stained gel types:

- White light can be used for viewing Coomassie blue and silver stained protein gels, autoradiographs and microtiter plates
- The UV side can be used for viewing Ethidium Bromide and other stained gels

White/UV Transilluminator *Easily switch between the UV and white light sources.*

Ordering Information	
TLW-20 8-watt 365nm UV/White Filter Size 20 x 20cm	95-0415-01 (100-115V) 95-0415-02 (230V)
TMW-20 8-watt 302nm UV/White Filter Size 20 x 20cm	95-0415-04 (100-115V) 95-0415-05 (230V)
LMW-20 8-watt 365/302nm UV/White Filter Size 20 x 20cm	95-0418-01 (100-115V) 95-0418-02 (230V)
Replacement Tube, White Replacement Tube, 365nm Replacement Tube, 302nm	34-0056-01 34-0006-01 34-0042-01

Dimensions: Height include UV blocking cover

13.25D x 19.13W x 5.64H in. (337 x 486 x 143mm)
Weight: 21 lb. (9.6 kg)

White Light Transilluminators

White Light Transilluminators offer uniform light diffusion for autoradiographs, film positives, negatives, X-ray film, microtiter plates and gels.

Plexiglas® and glass filter plates are sealed into the unit for durability.

Work areas of 21 x 26cm or 36 x 43cm.

Ordering Information	
TW-26 8-watt Filter Size 21 x 26cm Replacement Tube	95-0208-01 (115V) 95-0208-02 (230V) 34-0056-01
TW-43 14-watt Filter Size 36 x 43cm Replacement Tube	95-0214-01 (115V) 95-0214-02 (230V) 34-0059-01

Dimensions:

TW-26: 9.5D x 13.25W x 4.25H in. (241 x 337 x 108mm)
Wt: 8 lb. (3.8 kg)

TW-43: 19.1D x 16W x 4.25H in. (486x406x108mm)
Wt: 19 lb. (8.6 kg)

Converter Light Plates

UV/White Converter Plates

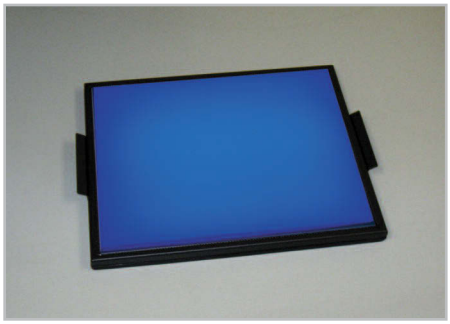
Convert UV to White Light

Specially designed plate converts the transilluminator's UV radiation to white light for viewing protein gels, Coomassie blue stained or silver stained media.

- Uniquely phosphored glass assembly (patented) converts the UV radiation via a white diffuser
- Handles are placed on two sides of the plate for easy handling

Ordering Information	
UV to White Light Converter Plates	38-0191-01 21 x 26cm 38-0191-02 20 x 40cm 38-0191-04 25 x 26cm

UV/Blue and UV/UV Plates



Visi-Blue™ Converter Plate *Scratch resistant glass surface is secured to the metal frame.*

Visi-Blue Converter Plate includes an amber camera filter for use in photo-graphing gels.

Position the plate on top of a UV transilluminator to convert the 302nm UV. Visi-Blue Plate converts UV to 460-470nm blue light for use with various stains including SYBR Green, SYPRO Orange and GFP.

UV/UV Converter Plate converts 302nm to 365nm UV which is ideal for preparation and gel excision work.

Ordering Information	
Visi-Blue Converter Plates (460-470nm)	38-0200-01 21 x 26cm 38-0200-02 20 x 40cm 38-0200-04 25 x 26cm
Visi-Blue Converter Plate with Amber Cover (460-470nm)	38-0242-01 21 x 26cm
UV/UV Converter Plate (302 to 365nm)	38-0325-01 25 x 26cm

Gel Tools

- **Gel-Cutter:** Edge allows for easy cutting and removal of gel material
- **Gel-Scooper**: Made of strong acrylic with a beveled edge designed for transfer of gels
- **Gel-Trays**: UV transmitting trays can be used for moving gels to the transilluminator. Tray protects the filter surface from scratches
- **Gel-Ruler:** Centimeter markings fluoresce under 365nm and 302nm UV wavelengths

Gel-Tools *are useful for researchers working with transilluminators as well as gel imaging systems.*

Photo shows Gel-Trays, Gel-Scooper, Gel-Cutter and Gel-Ruler.

Gel-Tool Kit *combines a Gel-Ruler, Gel-Cutter, Gel-Tray, Gel-Scooper plus Faceshield.*

Ordering Information	
Gel-Tool Kit	98-0109-01
Gel-Trays, Plexiglas® 10.75W x 9D in. (27 x 23cm) 11.5W x 9D in. (29 x 23cm) 16.5W x 10.5D in. (42 x 27cm) **Gel-Tray,** stainless steel/glass 16.5W x 10.5D in. (42 x 27cm)	 85-0007-05 85-0007-01 85-0005-01 38-0296-03
Gel-Cutter, 20cm **Gel-Ruler,** 25cm **Gel-Scooper**, 5W x 12L in.(12.7 x 30.5cm)	85-0002-01 85-0003-01 85-0006-01

Fluorescent Standard Step Tablet

Place the non-photobleaching Step Tablet (patent pending) next to your gel on a FirstLight UV Illuminator. The Step Tablet has a calibrated 21-step gradation with density from totally clear (step 1) to totally opaque (step 21). The gradation allows accurate, consistent comparison of the bands and spots on acquired images against one another and the step tablet for variations in lighting and optical conditions. Allows evaluation of the image against the grayscale.

Ordering Information	
Step Tablet	33-0014-02

BioImaging Systems Overview

Basic Imaging Systems

Opt - Optional

System/Spec	Camera Type	Epi Lighting			Transilluminator			Filter	Filters	Touch	Software	
		White	Blue	UV	White	Blue	UV	Tray Spots	Included	Screen	Capture	Analysis
GelMax	DigiColor	X			Opt	Opt	X	5	1		X	X
BioDoc-It	CCD	X			Opt	Opt	X	1	1	8”	X	
MultiDoc-It	DigiColor	X		Opt	Opt	Opt	X	3	1		X	
DigiDoc-It	DigiColor				Opt	Opt	X	1	1		X	
ChromaDoc-It	DigiColor	X		X							X	
ColonyDoc-It	DigiColor	X	X		X			2			X	X
PhotoDoc-It	DigiColor				Opt	Opt	X	1	1			

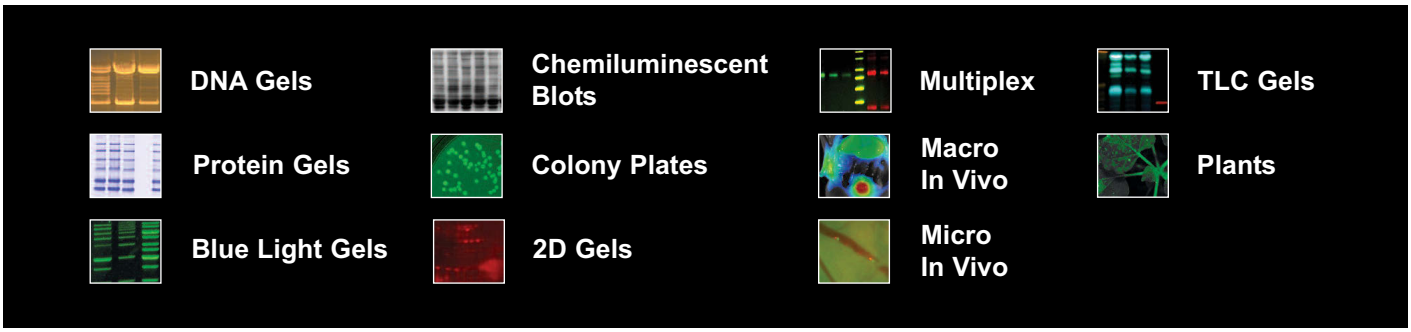
Advanced Imaging Systems

System/Spec	CCD Camera	Epi Lighting			Transilluminator			Filter	Filters	Touch	Software	
		White	Blue	UV	White	Blue	UV	Tray Spots	Included	Screen	Capture	Analysis
BioSpectrum	Cooled*	X	X	X	X	Opt	X	5	3		X	X
ChemiDoc-It	Cooled	X									X	X
ChemiDoc-It^{TS2}	Cooled	X		Opt	Opt	Opt	X	5	1	15.6”	X	X
ChemiDoc-It^{2}	Cooled	X		Opt	Opt	Opt	X	4	1		X	X
GelDoc-It^{TS2}	Non-cooled	X		Opt	Opt	Opt	X	5	1	15.6”	X	X
GelDoc-It^{2}	Non-cooled	X		Opt	Opt	Opt	X	4	1		X	X
GelDoc-It^{3}	Non-cooled	X			Opt	Opt	X	1	1		X	X

Note: System configurations may vary by country. iBox Series Imaging Systems for in vivo imaging also available. See page 38 for details.
* BioSpectrum may be configured with a cooled or non-cooled monochrome CCD camera.

BioImaging Systems Applications

UVP’s Imaging Systems are used for a variety of research applications. The most common applications are listed here. Each system is coded with the applicable icons. Some applications may require accessories such as converter plates or BioLite.



Basic Imaging Systems

ColonyDoc-It™ Imaging Station

Accurate and automated colony counting is possible with this compact station. High resolution megapixel digital color camera captures white light and fluorescent marked colonies. The epi blue light and the optional GFP filter enable users to visualize GFP fluorescence detection.

ColonyDoc-It Applications*

***Applications** include fluids contamination, microbiology and hygiene studies, antibiotic testing and more.*

Integrated high resolution **DigiCam color camera**** to capture colonies

Ability to insert and select up to 2 **emission filters**

Alcove to accommodate **33 - 150mm** plate and filter sizes

Compact footprint is designed for small laboratory benches

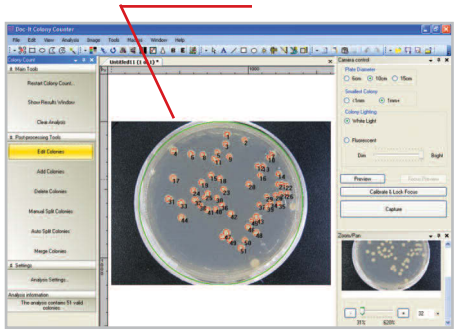
Epi white and blue lights

Detachable doors provide a darkroom environment for illuminating GFP colonies

Bright darkfield and white light transillumination

User defined templates and counting parameters such as eight color differentiation

Intuitive software enables users to quickly capture and count colonies. Simply place the colonies in the station, select the optimal light source, capture the colony image, and click a button to automatically count the colonies. Detailed statistics reports can then be generated.



***Colony Counting Software** loads on user's computer for camera control, image capture and colony counting.*

Ordering Information	
ColonyDoc-It Imaging Station	97-0539-01 (100-115V) 97-0539-02 (230V)
Filter, GFP	38-0340-01

Dimensions:

13W x 12.5D x 17.5H in. (343 x 318 x 445mm)

** For current camera specifications, go to UVP.com or contact UVP.
* Applications may require accessories.

UV Incubator

UV Sterilizing Incubator provides precise temperature control and uniformity throughout the chamber for incubation of biological assays, fungal, bacterial cultures, eggs and other samples.

- Microprocessor-controlled incubation temperature
- Heating element and fan generate uniform temperature throughout the chamber
- Decontaminate the chamber between growth experiments with the overhead shortwave 254nm UV sterilization
- Two ventilated shelves included; remove the shelves to stack up to 150 10cm plates
- Temperature: Ambient to 68°C
  Accuracy: +0.5°C
  Uniformity: +0.1°C at 37°C
  Humidity: ~80%

***UV Incubator** for growth experiments prior to colony counting.*

Dimensions:

17.5W x 14.75D x 18H in. (445 x 375 x 457mm)

Volume: 0.95 cubic ft. (26.9 liters)

Ordering Information	
SI-950 UV Benchtop Incubator	95-0358-01 (115V) 95-0358-02 (230V)
Replacement Tube, 8W, 254nm UV	34-0007-01

ChromaDoc-It™ Imaging Systems

ChromaDoc-It features a high resolution digital color camera plus overhead UV for capturing brilliant color Thin Layer Chromatography (TLC) images. Software loads on the user's computer for image capture, image enhancement and reports.

High resolution digital color camera to capture gel images

Ethidium bromide filter

Built-in overhead **254nm/365nm UV** for bright illumination of samples

Lightweight cabinet features a curtain to block ambient light

ChromaDoc-It TLC Imaging System *The high resolution color camera is excellent for imaging thin layer chromatography (TLC) gels.*

MultiDoc-It™ Imaging Systems

The sturdy housing of the **MultiDoc-It** is for multiple user laboratories capturing gel images. For imaging in Thin Layer Chromatography (TLC) applications, the system is available without a transilluminator.

Wide access door with UV-safe viewing window

Camera mounts in the darkroom

Ethidium bromide filter

Optional **UV lamps** mount in the darkroom for overhead UV lighting (lamps are included with MultiDoc-It TLC version)

Transilluminator connects to the darkroom; UV shuts off when door is open (select from several models)

MultiDoc-It System *shown with optional UV lamps for overhead ultraviolet illumination.*

Systems include: Digi Camera**, darkroom, UV transilluminator, capture/control software (Win XP or higher), EtBr filter. MultiDoc-It TLC includes UV lamps but no transilluminator

Dimensions: 14W x 12.7D x 19H in. (356 x 323 x 483mm)

** For current Digi Camera specifications, go to UVP.com or contact UVP.
Note: For DigiDoc-It, ChromaDoc-It and MultiDoc-It Systems, software loads on user's computer for image capture.

ChromaDoc-It Applications

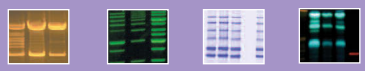
- Cabinet features built-in overhead shortwave and longwave UV positioned on two sides of the cabinet for uniform UV illumination
- Interior overhead white light
- Software controls the camera, image capture and enhancement functions

Ordering Information	
ChromaDoc-It System	97-0109-01 (115V) 97-0109-02 (230V)

Systems include: Digi Camera** (High Megapixel Digital Color), Cabinet with 254/365nm UV and Camera Mount, TLC filter; Capture/Control Software (Windows XP or higher)

Cabinet Dimensions: 19.75W x 16.5D x 15.375H in. (502 x 419 x 391mm)

MultiDoc-It Applications*



- High resolution megapixel digital color camera for capturing images
- Rugged metal darkroom, with overhead white light, mounts onto a transilluminator (or plate for TLC applications)
- Capture software enables image capture, enhancement and reporting capabilities
- Optional UV lamps can be mounted in the darkroom for overhead UV illumination (MultiDoc-It TLC includes two UV lamps but no transilluminator)

Ordering Information	
MultiDoc-It with M-20V Transilluminator	97-0192-01 (115V) 97-0192-02 (230V)
MultiDoc-It with LM-20E Transilluminator	97-0193-01 (115V) 97-0193-02 (230V)
MultiDoc-It with M-26V Transilluminator	97-0194-01 (115V) 97-0194-02 (230V)
MultiDoc-It with LM-26E Transilluminator	97-0195-01 (115V) 97-0195-02 (230V)
MultiDoc-It TLC with 2 UVGL-25 UV lamps	97-0202-01 (115V) 97-0202-02 (230V)
UVGL-25 UV Lamp, 254/365nm UV	95-0021-12 (115V) 95-0021-10 (230V)

Models available with side access doors.
* Applications may require accessories.

DigiDoc-It® Imaging Systems

The **DigiDoc-It** System is economically designed for image capture and documentation of gels and plates. UVP's exclusive software loads on the user's PC, controls the camera functions and offers many image enhancement and reporting features.

DigiCam camera mounts under the protective cover
Viewport for seeing the fluorescent gels
Lightweight molded hood enclosure with handles
Access door
Hood sits on the Transilluminator
High Performance UV Transilluminators feature 25 watt, 302nm UV

Ordering Information	
DigiDoc-It Imaging System with TFM-20V Transilluminator (20x20cm)	97-0243-01 (100-115V) 97-0243-02 (230V)
DigiDoc-It Imaging System with TFM-26V Transilluminator (21x26cm)	97-0244-01 (100-115V) 97-0244-02 (230V)
DigiDoc-It Imaging System with TFM-30V Transilluminator (25x30cm)	97-0246-01 (100-115V) 97-0246-02 (230V)
DigiDoc-It Imaging System (No Transilluminator)	97-0105-01 (100-115V) 97-0105-06 (230V)
Drawer (order Benchtop Transilluminator separately)	98-0068-01

Systems include: Digi camera, hood, EtBr filter; capture/control software (Windows XP or higher), with or without a UV transilluminator

Doc-It®LS Analysis Software

Doc-ItLS Software is designed for analysis of 1D gels. The analysis module compliments the capture software package included with the DigiDoc-It, MultiDoc-It and ChromaDoc-It systems.

- Generate easy to interpret quantitative data of lanes and bands
- Measure angles, areas and lengths with the Measurement Tool
- Detect straight, curved or slanted lanes and bands
- Create histograms for detailed visual analysis

In addition to analysis functions, users can set preferences and generate reports. The software supports 21 CFR Part 11 compliance.

DigiDoc-It Applications*

- High resolution digital color camera captures brilliant color images
- Exclusive software controls the camera and enables image capture, enhancement, annotation and archiving
- Quickly see live preview of gel images on the computer monitor
- Select a large format High Performance UV Transilluminator; for gels up to 25x30cm, select the DigiDoc-It with the TFM-30V Transilluminator

Digi Cam Camera Specifications	
CCD Imager:	High resolution megapixel camera**
Interface:	USB connector
Power Supply:	AC Adapter Kit

** For current camera specifications go to UVP.com or contact UVP.

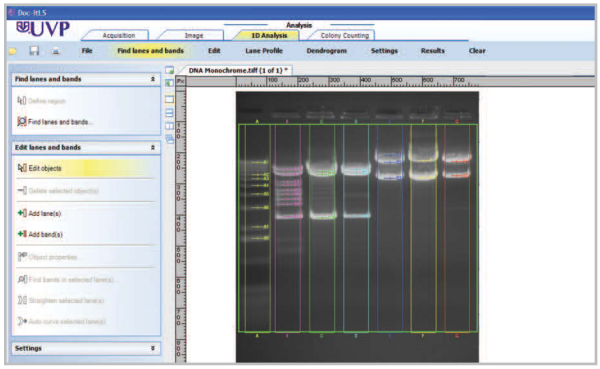
DigiDoc-It System *with the optional drawer (right) and Benchtop UV Transilluminator (ordered separately, see pages 23-24 for transilluminators)*

Drawer Dimensions:

19.1W x 7.7H x 15.1D (485 x 196 x 384mm)

Hood Dimensions:

17.75W x 16.6 x 12D in. (451 x 422 x 305mm)



Ordering Information	
1D Analysis Software (compatible with Windows XP or higher)	97-0185-02

BioDoc-It® Imaging Systems

BioDoc-It Systems are available in two different styles:

- **BioDoc-It 220** models feature a 1.3 megapixel camera plus side access doors
- **BioDoc-It 210** models feature a 0.3 megapixel camera (no side doors).

Capture, preview and save gel images with user-friendly features that enable fast, easy to use gel documentation. The simple design is excellent for multiple user laboratories. An external computer is not required. Network connectivity is integrated for transfer of images directly to a computer.

BioDoc-It Applications*

Large **8" touch screen** displays live preview of images; the screen tilts for optimum viewing angle

Save images to the USB drive or connect to a network for image transfer to another computer

Unique Viewer window allows UV-safe viewing of gels without opening the door

Wide access door with safety switch turns UV off when the door is open

Compact design and small footprint are excellent for limited laboratory space

Choice of monochrome **CCD camera - FluorCam 210 or FluorCam 220**

Zoom lens is easily accessible for adjustment of the aperture, zoom and focus

Ethidium bromide filter is placed in the slide-out filter tray; allows exchange of filter (other filters available)

Epi white light for focusing and illumination of samples

Side access doors (BioDoc-It 220 models only) allow gels to be moved while viewing gel fluorescence through the window

Select from **Benchtop UV or Visi-Blue Transilluminators**

* Applications may require light plates. See page 27 for details.

Commonly used functions are selected directly from the main screen:

- **Live** – See a live preview of the gel
- **Snap** – Capture the image and **Save** the snapped image to TIFF, GIF and JPEG file formats
- **Print** – Connect and print to an optional printer
- **Time Stamp** – Set the date and time for each image captured
- **Exp Warn** – Set the exposure warning
- **Pref** – Set user preferences
- **Integration** – Increase or decrease integration times

Optional Accessories

GelTray protects the transilluminator surface (27 x 23cm) **85-0007-05**

Thermal Printer for archive quality prints. See page 39 for details.

SYBR Green Filter enables capture of SYBR Green and similiar stains. **38-0219-01**

Camera Specifications		
Camera/ Description	**FluorCam 210**	**FluorCam 220**
CCD Imager:	Monochrome 8-bit scientific grade CCD	Monochrome 12-bit scientific grade CCD; 16-bit file bit depth
Resolution:	0.3 megapixels	1.3 megapixels
Pixel Resolution:	640 x 480	1280 x 1024
Grayscale:	0 - 256	0 - 65,535
Lens:	8-48 mm zoom	8-48 mm zoom

Ordering Information				
BioDoc-It 210 (FluorCam 210 Camera) 115V	**230V**	**UV Transilluminator Included**	**BioDoc-It 220 (FluorCam 220 Camera) 115V**	**230V**
97-0165-01	97-0165-02	with M-20V (20x20cm, 302nm)	97-0182-01	97-0182-02
97-0166-01	97-0166-02	with LM-20 (20x20cm, 302/365nm)	97-0174-01	97-0174-02
97-0167-01	97-0167-02	with M-26V (21x26cm, 302nm)	97-0183-01	97-0183-02
97-0168-01	97-0168-02	with LM-26 (21x26cm, 302/365nm)	97-0175-01	97-0175-02
97-0170-01	97-0170-02	with LMS-20 (20x20cm, 254/302/365nm)	97-0176-01	97-0176-02
97-0171-01	97-0171-02	with LMS-26 (21x26cm 254/302/365nm)	97-0177-01	97-0177-02
97-0172-01	97-0172-02	with M-26XV (25x26cm, 302nm)	97-0178-01	97-0178-02

BioDoc-It Visi-Blue Transilluminators provide users with 460-470nm blue light as an alternative to traditional UV-based transillumination. Conduct safe imaging using non-mutagenic stains such as GelGreen, SYBR, SYPRO and GFP.

BioDoc-It 210 (FluorCam 210 Camera) 115V	**230V**	**Visi-Blue Transilluminator Included with the BioDoc-It**	**BioDoc-It 220 (FluorCam 220 Camera) 115V**	**230V**
97-0599-01	97-0599-02	with VB-26 (21x26cm, blue light)	97-0600-01	97-0600-02

BioDoc-It Systems include: CCD monochrome camera/lens, touch screen computer, darkroom, capture software, epi white light, Ethidium bromide filter, transilluminator, USB stick

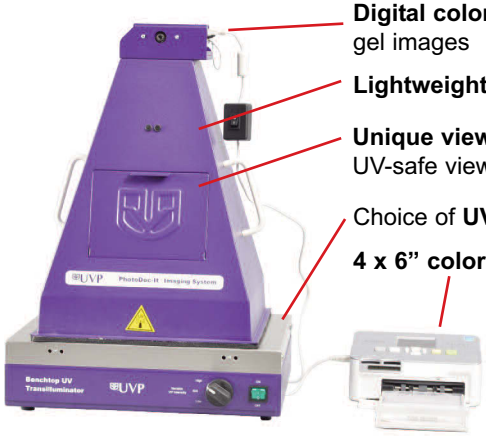
BioDoc-It Dimensions: External with camera: 30.7H x 14.2W x 13.3D in. (780 x 361 x 338mm); Darkroom Internal: 11D x 13W in. (279 x 330 mm)

PhotoDoc-It Imaging Systems

Compact **PhotoDoc-It**™ provides an entry-level system for gel documentation. The system is designed to replace instant Polaroid photodoc systems for low cost prints. No computer required with this sytem.

- Illuminate stained gels with the UV fluorescence of the Benchtop UV Transilluminator
- Capture brilliant color images with the high resolution digital camera
- Save images to memory card or transfer to a computer (USB connection) for viewing or documentation
- Instantly print images on the lab quality color photo printer (included)

PhotoDoc-It Applications*


Digital color camera captures gel images
Lightweight hood with handles
Unique viewer window allows UV-safe viewing of gels
Choice of UV transilluminator
4 x 6" color prints (108 prints)

PhotoDoc-It Specifications	
DigiCam:	Megapixel resolution color camera**
Hood:	Compact design of metal construction Handles for portability Fits transilluminator filter size up to 21x26cm
Printer:	Color with 300 x 300 resolution 4 x 6" prints (108 prints/ink included) and USB connectivity Dim: 7 x 5 x 2.5 in. (178 x 127 x 64mm)
Lock:	3 digit resettable combination lock

PhotoDoc-It includes: DigiCam Camera, hood enclosure, EtBr filter, combination lock, color printer and choice of UV Transilluminator

Dimensions:
17H x 13.25W x 9.5D in. (432 x 337 x 241mm)

* Applications may require light plates. See page 27 for details.

** For current camera specifications go to UVP.com or contact UVP.

Ordering Information		
Model	**Transilluminator Included**	**Part Numbers**
PhotoDoc-It	M-20 (302nm UV, 20x20cm filter)	97-0274-04 (100-115V) 97-0274-05 (230V)
PhotoDoc-It	LM-20 (302/365nm UV, 20x20cm filter)	97-0274-07 (100-115V) 97-0274-08 (230V)
PhotoDoc-It	M-26 (302nm UV, 21x26cm filter)	97-0274-10 (100-115V) 97-0274-11 (230V)
PhotoDoc-It	LM-26 (302/365nm UV, 21x26cm filter)	97-0274-13 (100-115V) 97-0274-14 (230V)
Paper/Ink kit (for PhotoDoc-It printer)		96-0164-01

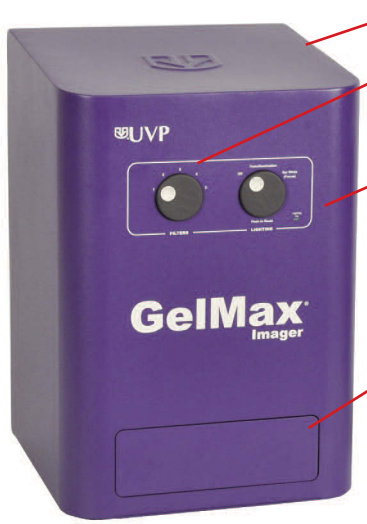
GelMax® Imager

The compact **GelMax Imager c**aptures brilliant publication quality images of precast and mini gels up to 11.5 x 16cm. Illuminate stained gels with interchangeable transillumination sources: midrange (built-in), white, blue and longwave UV. Analyze results using simple workflow-focused software which loads on user's PC. *Applications may require additional light plates; see ordering information below.

GelMax Imager Ordering Information	
GelMax Imager	97-0672-01 (115V) | 97-0672-02 (230V)
Camera	Color, high resolution**
Darkroom	Compact size, epi white light built-in, 5-position filter wheel (EtBr filter included)
Transillumination Lighting	302nm UV (filter size 11.5 x 16cm) built-in 10-minute shutoff timer
Light Plates, (optional) 11.5 x 16cm	Longwave 365nm UV (38-0381-01) Visi-Blue 460/470nm (38-0381-02) White light (38-0381-03)
Software	Doc-It®LS capture and analysis (Win XP or higher)

GelMax includes: Color camera, darkroom, ethidium bromide filter, 302nm transilluminator, black tray, Doc-It capture/analysis software (loads on user's PC). **For current camera specifications, go to UVP.com or contact UVP.

GelMax Applications*



Color camera

Filter tray - 5 positions (with Etbr filter)

Lighting controls

302nm UV - add light plates for viewing 11.5 x 16 cm precast gels

***GelMax Imager** is designed with interchangeable light plates for imaging of precast and mini gels.*

Dimensions: 15.5H x 12.8W x 13D in. (394 x 325 x 330mm)

Advanced Imaging Systems

GelDoc-It® Imaging Systems

GelDoc-It® Imaging Systems provide a plug-and-play configuration with a compact, easy-to-operate design. VisionWorks®LS Software (see page 39 for details) features efficient image capture, quantitative 1D analysis and gel documentation capabilities.

GelDoc-It® Applications*

* Applications may require light plates. See page 27 for plates.

Monochrome **FluorCam 220 CCD camera**

Zoom lens is easily accessible for adjustment of aperture, zoom and focus

Unique viewer window allows UV-safe viewing of gels without opening the door

Side access doors for repositioning gels while viewing gel fluorescence through the window

Integrated **UV Transilluminator**

Ethidium bromide filter is placed in the slide-out filter tray; allows easy exchange of filter

Epi white light for focusing and illumination of samples

Safety switch turns UV off when the door is open

Compact design and small size for limited laboratory space

Dimensions:
30.7H x 14.2W x 13.3D in. (780 x 361 x 338mm)

GelDoc-It® includes: CCD monochrome camera/lens, darkroom, epi white light, Ethidium bromide filter, choice of transilluminator, VisionWorksLS capture/analysis software (loads on user's computer; compatible with Windows 7 or higher).

Camera Specifications	
Model:	FluorCam 220
CCD Type:	Monochrome 12-bit
Resolution:	1.3 megapixels, extendable to 5.0 MP
Pixel Resolution:	1280 x 1024
Grayscale:	0 - 65,535
Lens:	8-48 mm zoom

ChemiDoc-It®TS2 and GelDoc-It®TS2 Imaging Systems

The **ChemiDoc-ItTS2 and GelDoc-ItTS2 Imaging Systems** feature a large integrated touch screen with easy touch buttons for image preview, capture and save functions.

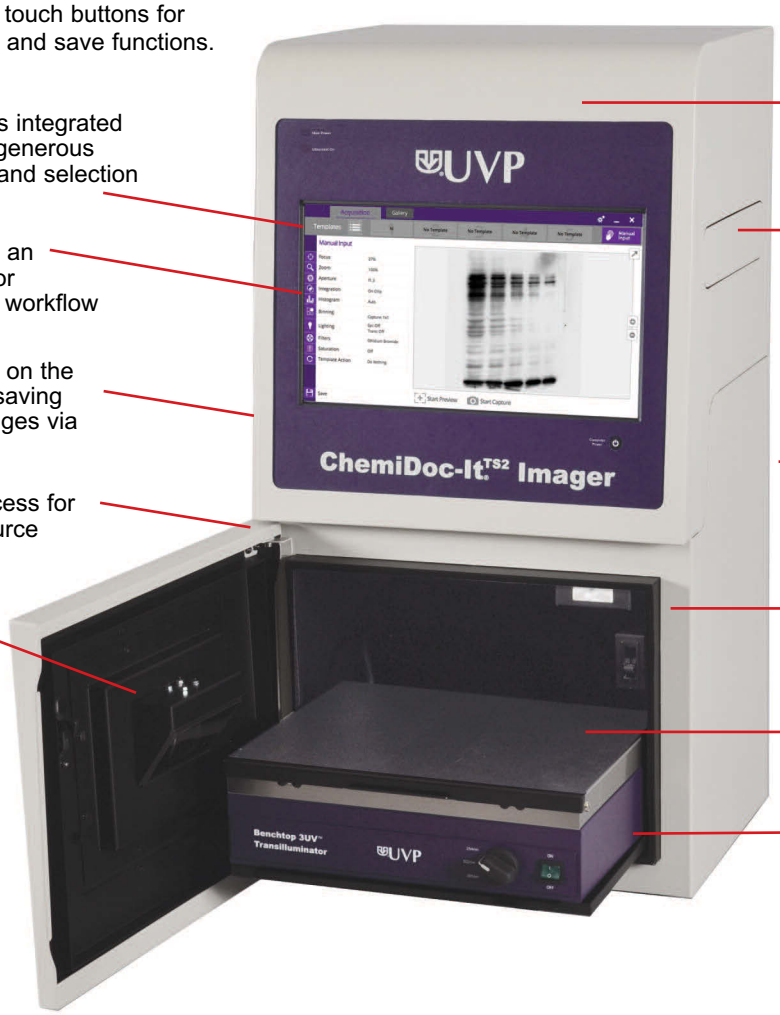
Large Touch Screen is integrated into the system with a generous 15.6" for easy viewing and selection of functions

TS2 Software features an intuitive control panel for simplifying the imaging workflow

USB Ports are located on the side of the cabinet for saving images; or transfer images via network connectivity

Side Port provides access for the optional BioLite source

Unique viewer window allows UV-safe viewing of gels without opening the door



CCD Camera and lens, built into the cabinet, offer high sensitivity for a variety of imaging applications

Emission Filters are placed in the easy access five-position filter tray

An ethidium bromide filter is standard; additional filters are available

Light-Tight Cabinet is ideal for chemiluminescent imaging applications

Epi White Lights are built into the cabinet for lighting and focusing purposes

Chemi Tray enables placement of samples such as chemiluminescent Western blots (ChemiDoc-ItTS2 only)

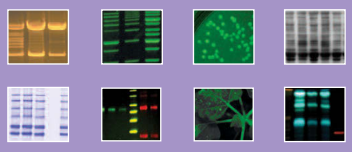
Transilluminator is placed on the easy access roll-out tray

Choose from models with single UV or multiple UV wavelengths and filter sizes from 21x26cm to 25x26cm

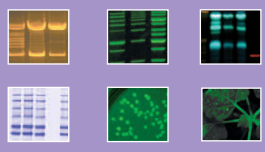
System Selection

- **ChemiDoc-ItTS2 810**: Class-leading image resolution and cooled CCD (MegaCam 810) with 8.1 MP resolution. Enables shorter exposure times in chemiluminescence, fluorescence and colorimetric applications.
- **ChemiDoc-ItTS2 510**: Cooled CCD camera (BioChemi 510) with 2.1 MP delivers affordable, high sensitivity for chemiluminescence, fluorescence and colorimetric applications.
- **GelDoc-ItTS2 310** with a high resolution CCD camera (GelCam 310) with 2.0 MP resolution for fluorescence and colorimetric imaging applications.

ChemiDoc-ItTS2 Applications*



GelDoc-ItTS2 Applications*



* Applications listed may require additional accessories.

System Specifications:

Monitor:	15.6" touch screen
Computer:	Integrated into system
Software:	TS2 image capture software
Camera/Lens:	See specifications p. 39
Save Options:	USB stick or transfer images via network (wireless or wired)
Darkroom:	Light tight Chemi tray (ChemiDoc-It only)
Epi Light:	White Light
Transillumination:	Single or Multiple UV Filter sizes: 21x26 or 25x26cm
Emission Filters:	EtBr (580-630nm) Five position filter wheel Other filters available

Dimensions (WDH): 17.5 x 14.5 x 33.5 in. (44.4 x 36.8 x 85.1cm)

Systems includes: Camera and lens, darkroom with built-in computer touch screen, EtBr filter, epi white light, choice of transilluminator, USB flash drive, keyboard and mouse. **System configurations may vary by country.** Contact UVP for system details.

ChemiDoc-It^2® and GelDoc-It^2® Imaging Systems

ChemiDoc-It^2 and GelDoc-It^2 Systems with separate computer and monitor allow users to capture quality images and perform quantitative analysis, image enhancements and generate reports at one location.

High resolution scientific grade **CCD camera**

Motorized or **manual lens**

Selectable **four position filter wheel;** includes an **Ethidium Bromide filter** (optional filters available)

Access port for connecting to the external **BioLite** (optional) high intensity multispectral light source

Unique viewer window allows UV-safe viewing of gels without opening the door

Ultraviolet transilluminator sits on the easy-access roll out tray (select from single or multiple UV wavelengths)

The optional **LED White Light Plate** plugs into the dark-room for samples such as Instant Blue, Coomassie Blue and Silver Stains.

White light sources include epi white light and optional LED white light plate for illumination of Instant Blue, Silver and Coomassie Blue

Lighting switches are conveniently located

Computer required (order separately)

VisionWorks®LS Software for image capture, enhancement, analysis and documentation of gels, blots and plates. See p. 39 for information.

System Selection

- **ChemiDoc-It^2 810** with class-leading image resolution and cooled CCD (MegaCam 810) with 8.1 MP resolution. Enables shorter exposure times in chemiluminescence, fluorescence and colorimetric applications.
- **ChemiDoc-It^2 610** deeply cooled CCD (OptiChemi 610) with 3.2 MP resolution and extended exposure times in IR/NIR, multiplex and chemiluminescence applications.
- **ChemiDoc-It^2 510** with cooled CCD camera (BioChemi 510) with 2.1 MP or 4.1 MP resolution** delivers affordable, high sensitivity for chemiluminescence, fluorescence and colorimetric applications.
- **GelDoc-It^2 310** with high resolution CCD camera (GelCam 310) with 2.0 MP resolution for fluorescence and colorimetric research.

** 2.1 MP with zoom lens, 4.1 MP with fixed lens

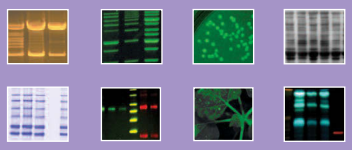
System Specifications:

Cameras/Lens:	See specifications p. 39
Darkroom:	Light tight Wide access door Sliding transilluminator tray Gel viewing window Chemi tray (with chemi systems)
Epi Light:	White Light
Transillumination:	Single or Multiple UV Filter sizes: 21x26 or 25x26cm
Emission Filters:	EtBr (580-630nm) Four position filter wheel Other filters available
Software:	VisionWorksLS capture/analysis

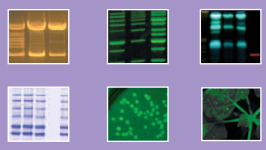
Dimensions (WDH): 18.5 x 15 x 32 in.
(47 x 38 x 81cm)

Systems includes: Camera and lens, darkroom, EtBr filter, epi white light, choice of transilluminator, VisionWorksLS Capture and Analysis Software.
System configurations may vary by country.
Contact UVP for system details.

ChemiDoc-It^2 Applications*



GelDoc-It^2 Applications*

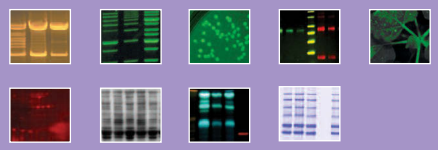


* Applications listed may require additional accessories.

BioSpectrum® Imaging Systems

The BioSpectrum System with its advanced, automated capabilities enables a wide range of imaging applications. Select from cooled or non-cooled cameras configured for specific applications and budget requirements.

BioSpectrum Applications*



BioSpectrum Darkroom is light tight and automated with all functions controlled via VisionWorksLS software

Access port for connecting the external **BioLite** high intensity multispectral light source (optional)

Unique viewer window allows UV-safe viewing without opening the door

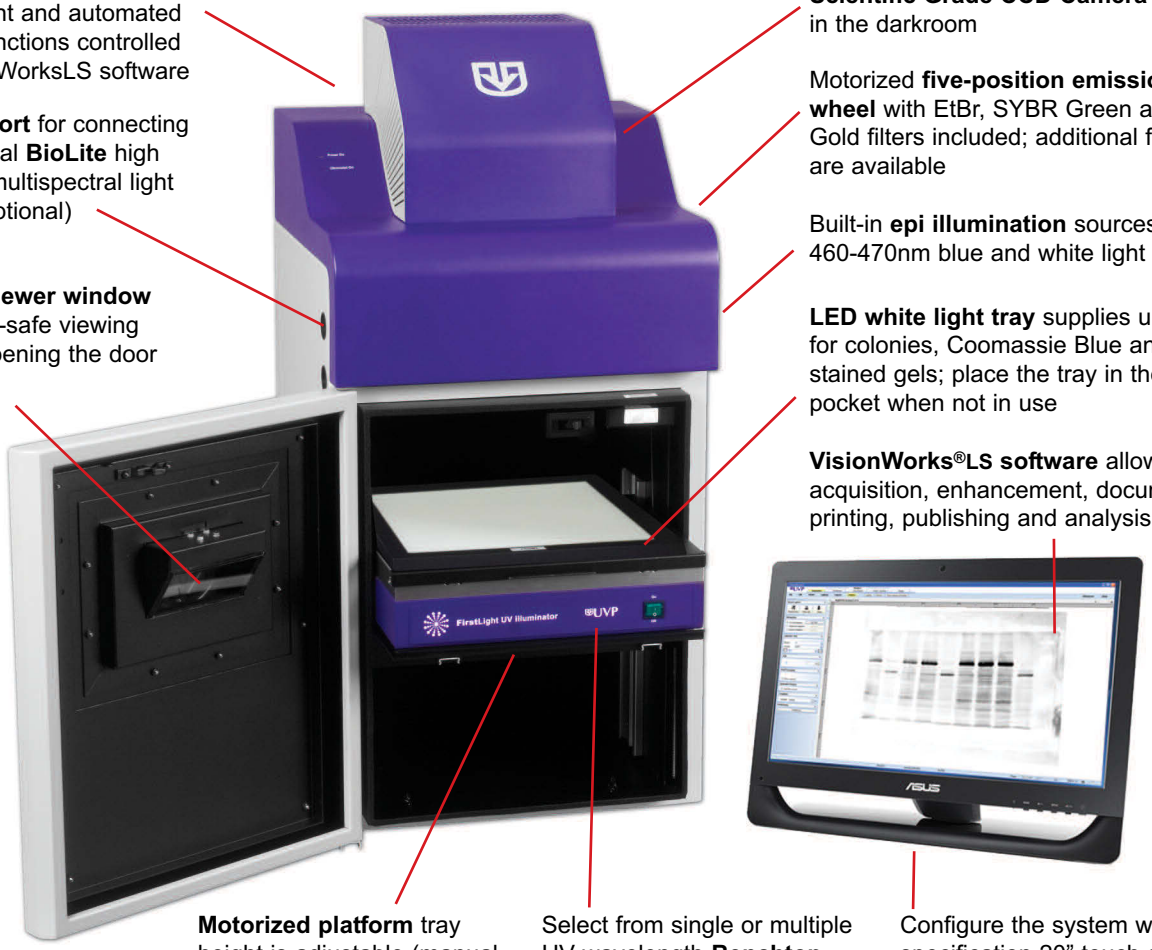
Scientific Grade CCD Camera mounted in the darkroom

Motorized **five-position emission filter wheel** with EtBr, SYBR Green and SYBR Gold filters included; additional filters are available

Built-in **epi illumination** sources: 365nm UV, 460-470nm blue and white light

LED white light tray supplies uniform light for colonies, Coomassie Blue and Silver stained gels; place the tray in the side pocket when not in use

VisionWorks®LS software allows image acquisition, enhancement, documentation, printing, publishing and analysis



Motorized platform tray height is adjustable (manual lift platform also available)

Select from single or multiple UV wavelength **Benchtop Transilluminators**

Configure the system with a high specification 20" touch screen **computer/monitor** (order separately)

System Selection

- **BioSpectrum 810** with class-leading image resolution, cooled CCD camera (MegaCam 810) with 8.1 MP resolution. Camera enables shorter exposure times in chemiluminescence, fluorescence and colorimetric applications.
- **BioSpectrum 610** deeply cooled CCD camera (OptiChemi 610) with 3.2 MP resolution and extended exposure times for IR/NIR, multiplex and chemiluminescence applications.
- **BioSpectrum 510** with cooled CCD camera (BioChemi 510) with 2.1 MP or 4.1 MP resolution** delivers affordable, high sensitivity for chemiluminescence, fluorescence and colorimetric applications.
- **BioSpectrum 310** with a high resolution CCD camera (GelCam 310) with 2.0 MP resolution for fluorescence and colorimetric research.

** 2.1 MP with zoom lens, 4.1 MP with fixed lens

Systems includes: Camera/lens, darkroom, 3 emission filters, epi white/UV/blue, UV transilluminator, LED white light plate, VisionWorksLS Software. **System configurations may vary by country.** Contact UVP for details.

System Specifications:

Cameras/Lens:	See specifications p. 39
Darkroom:	Light tight Motorized or manual platform Wide access door Sliding transilluminator tray Gel viewing window Chemi tray (chemi capable systems only)
Epi Light:	White Light, 365nm, 460-470nm
Transillumination:	Single or Multiple UV Filter sizes: 21x26 or 25x26cm
Emission Filters:	Three included Five position filter wheel Other filters available
Software:	VisionWorksLS capture/analysis
Dimensions:	17.5W x 17.5D x 32H in. (44.5 x 44.5 x 81.3cm)

* Applications listed may require additional accessories.

Advanced Imaging Systems

For detailed system specifications, application notes, videos and other information, go to uvp.com or scan the QR code for links to imaging systems.

iBox® Explorer™ Imaging Microscope

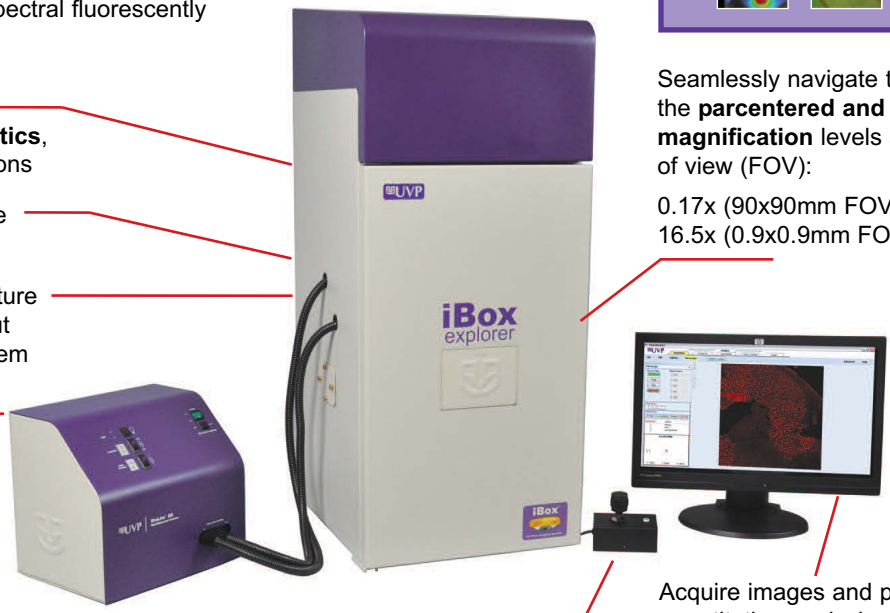
iBox Explorer™ Imaging Microscope is designed for macro to micro (0.17X to 16.5X) detection of fluorescent markers from whole organ to individual cell. Researchers can visualize and capture visible to NIR multispectral fluorescently labeled cells in vivo.

Capture images with the **high sensitivity CCD camera and optics**, ideal for in vivo imaging applications

View whole animal down to single cell via **motorized optics**

Maintain uniform animal temperature for up to two mice on the slide-out **warming plate** built into the system

BioLite™ Xe MultiSpectral Light Source with xenon light for excitation of a wide range of fluorescent stains; includes GFP/RFP filter set



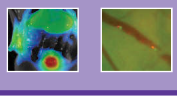
Seamlessly navigate through the **parcentered and parfocal magnification** levels and field of view (FOV):

0.17x (90x90mm FOV) to 16.5x (0.9x0.9mm FOV)

Acquire images and produce quantitative analysis results with **VisionWorks®LS Software**

Adjust the location of the **motorized X, Y, Z platform** via the external joystick; fine tune and bookmark stage positions using the software interface

iBox Explorer Applications



iBox® Scientia™ Imaging System

The **iBox Scientia Imaging System** allows non-invasive whole animal mouse imaging for pre-clinical research including tumor studies, metastases and immunology.

Capture superior images with **CCD camera** and optics for optimized visible to NIR imaging

Connect the BioLite™ multispectral fiber optic cable through the port for **directed visible to NIR epi illumination**

Keep mice at optimum temperature with the **warming plate** placed on the easy access roll-out tray

BioLite™ MultiSpectral Light Source (Xenon or Halogen) for excitation of a wide range of fluorescent stains; includes GFP/RFP filter set

Select the desired **emission filter** by software automation

Attach an external **anesthesia unit** (optional) via an access port in the darkroom

Generate accurate analysis data with **VisionWorks®LS Software**

iBox Scientia Applications

Advanced Imaging Systems Camera Specifications

Camera/Lens Specifications				
Specifications	**MegaCam 810**	**OptiChemi 610****	**BioChemi 510**	**GelCam 310**
CCD/File Bit Depth (A/D)	16 bit / 16 bit	16 bit / 16 bit	16 bit / 16 bit	12 bit / 16 bit
Grayscale Range	65,536	65,536	65,536	65,536
Pixel Resolution	3296 x 2472	2184 x 1472	2336 x 1751	1600 x 1200
Megapixels (MP)	8.1, extendable to 16.2*	3.2, extendable to 9.6*;	2.1 (with zoom lens), extendable to 7.4*; 4.1 (with fixed lens), extendable to 12 MP**	2.0, extendable to 6.0*
Cooling Type (Peltier)	-35º C from ambient	-50º C from ambient	-35º C from ambient	None
Binning Modes	1x1 thru 8x8	1x1 thru 10x10	1x1 thru 8x8	None
Quantum Efficiency Peak & Chemi 425nm	50% & 44%	86% & 53%	50% & 32%	---
Lens Options (Motorized or manual; call UVP for details)	50mm f/1.2, 30mm f/1.4, 25mm f/0.95**	50mm f/1.2, 30mm f/1.4, 25mm f/0.95	12.5-75mm f/1.2, 25mm f/0.95**	12.5-75mm f/1.2

* Extendable megapixels function does not apply to ChemiDoc-It^{TS2} or GelDoc-It^{TS2} Systems. ** Not for ChemiDoc-It^{TS2} or GelDoc-It^{TS2}.

VisionWorksLS Software

VisionWorksLS is a powerful software package designed with comprehensive tools to facilitate the capture and analysis of publication quality images. The software is used with UVP's Advanced Imaging Systems. Software capabilities include:

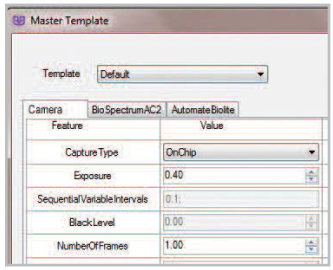
- Image acquisition controls
- Image enhancement functions
- 1D quantitation, area density analysis and colony counting
- User defined master templates
- Report generation and export of data to Excel
- Support for 21 CFR Part 11 compliance

Area Density *Use the Area Density function to determine intensity information. Generate lane profile graphs, dendrogram analysis and calculation of concentration curves*

The software enables easy selection of a variety of functions to achieve superior captured images. Exposure and integration controls include:

- **Integration: On-chip** integration for single image capture. **Sequential** integration captures multiple pictures taken at increasing exposure times. **Dynamic** integration captures images at set intervals.
- **AutoExpose** enables the perfect image exposure of gels and blots captured automatically below the saturation level of each pixel in the image.

Pre-Set and User-Defined Master Templates are great time savers and allow users to set and save darkroom and camera settings for quick, easy capture of samples. Use of templates aids in simplifying the image capture process, especially for repeat experiments.



Thermal Printer

Document gel and blot images with a 256 grayscale **thermal printer**. Compact printer easily connects to any of UVP's imaging systems (except the PhotoDoc-It).

- Low cost prints in seconds
- High resolution, 3x4" archive-quality thermal prints

Printer Dimensions:

6W X 9.5D X 3.3H in. (154 X 240 X 84mm)

Ordering Information	
Digital Thermal Printer Mitsubishi	89-0069-06 (115V) 89-0069-07 (230V)
Digital Thermal Printer Sony (for Europe)	89-0357-01 (230V)
Thermal Paper, Mitsubishi High density, 4 rolls (800 prints)	89-0038-01
Thermal Paper, Sony super glossy UPP110HG 5 rolls (1000 prints)	89-0174-01
Thermal Paper, Sony glossy UPP110HA 5 Rolls (1000 prints)	89-0031-01

Ultraviolet Applications

For application notes and information, contact UVP or go to UVP.com.

UVA Longwave UV - 365nm: **Laboratory/Research:** Bacterial Identification * Specimen Staining * Gel Electrophoresis * Chlorination * Fluorochemistry * Pesticide Analysis * Fluorescence Photography * Titration Processes * TLC * Nucleic Acid Visualization * Genetic Experiments * Virology * **Sanitation:** Aflatoxin Detection * Rodent Contamination and Lice Detection * Detection of Food Contamination * Milkstone Inspection * E-Coli Water Testing * Culture Fluorescence * **Medical:** Medical Diagnosis * Dermatology * Cosmetology * **Education:** Fluorescence Demonstration and Analysis * **Industrial:** Non-Destructive Testing * UV Curing * Magnetic Particle Inspection * Inspection of Conformal Coatings * Leak Detection * **Criminology:** Detection of Altered Documents * Counterfeit Currency Detection * Signature Verification * Forensic Applications * Coding/Marking * Arson Investigation * Lab Testing * **Electronics:** Clean Room Inspection * Epoxy Coat Inspection * **Miscellaneous:** Examination of Fine Art * Archaeology * Entomology * Photoresist Exposure * Philately * Re-Admission Control * Mineralogy * **Automotive:** Leak Detection * Windshield Repair

UVB Midrange UV - 302nm: **Research:** Gel Electrophoresis * Gel Viewing * Optical Lab Measurements * **Industrial:** UV Curing * Gradient Sampling * Solar Experimentation * **Medical:** Phototherapy * Dermatological * **Miscellaneous:** Mineralogy * Art and Museum Inspection

UVC Shortwave UV - 254nm: **Criminology:** Document Examination * Field Clue * Arson Investigation * Toxicology * **Education:** Fluorescence Demonstration/Analysis * **Laboratory/Research:** Fluorochemistry * Mercury Detectors * Optical Alignment * Pesticide Analysis * Polymer Curing * Sterilization * DNA Analysis * Biochemical Testing * Electrophoresis * TLC * Mutation * Mycology * Nucleic Acid Visualization * Photochemistry * Photo Disassociation * **Miscellaneous:** Air Pollution * E-Coli Testing * Alumina Testing * Archaeology * Fluorescence Photography * Mineralogy * Philately

UVP
An Analytik Jena Company

For information or to place an order, contact:

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